Robocentric
The transhumanistic American high-tech corporation that advances the science, technology, and capitalism of artificial intelligence, robotics, human immortality biotech, human genetic screening and engineering biotech, neurotech, nanotech, bionic biotech, and interplanetary, interstellar, and intergalactic mass-scale outer space humanity expansion tech

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This document contains the description of a science and technology research project performed at Robocentric, by Allen Young, Robocentric Chief Science and Technology Researcher, the transhumanistic Asian-American man, for advancing transhumanism.

Transhumanism is removing the human intelligence limit, removing the human manual labor limit, removing the human lifespan limit, and removing the human limit in being confined to Earth. Transhumanism is advancing artificial intelligence, robotics, biotech, nanotech, neurotech, and outer-space tech to the uttermost extremes—for enabling humans to have access to limitless human or humanlike intelligence, limitless human or humanlike manual labor, limitless human lifespan, and limitless human presence in the Universe.

Human and Humanlike Learning and Knowledge-Application Science and Technology for Making Humanlike AI And Robots Ubiquitous in America and Elsewhere in the First World

A Robocentric science and technology research project description

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Biosketch and autobiography at Robocentric.com/Bio
The transhumanistic Asian-American man who publicly promotes and advances the science, technology, and capitalism of artificial intelligence, robotics, human immortality biotech, neurotech, nanotech, and mass-scale outer space humanity expansion tech
A workaholic who works over 80 hours almost every week
A never-married and childless college dropout
From multiple generations of failed bloodlines
Born in AD 1979

Robocentric plan to transhumanize America and the rest of the First World at Robocentric.com/Future and Robocentric.com/Plan

Robocentric science and technology research projects at Robocentric.com/Projects

Robocentric.com

Transhumanize and posthumanize humankind—through advancing the science, technology, and capitalism of artificial intelligence, robotics, human immortality biotech, human genetic screening and engineering biotech, nanotechnology, neurotechnology, bionic biotech, and interplanetary, interstellar, and intergalactic mass-scale outer space humanity expansion tech.
—The Robocentric mission

Project Summary

Overview

In this project, Allen Young, the principal investigator of this project, aims to develop, textually specify, and publish an integrated or unified scientific theory that **links and integrates human biology, human sensory information processing, human learning and knowledge-application faculties and capabilities, technology-based human knowledge learning and application, machine information processing, and machine learning and knowledge application**—for enabling humans to learn and apply knowledge better, and for creating AI and robots that can learn and apply knowledge like humans.

Intellectual Merit

This project broadens and deepens the knowledge on what humans learn, how humans learn, and how and why humans apply knowledge or what they have learned—down to the human-body organic, tissular, cellular, molecular, atomic, and subatomic levels.

This project provides an integrated and unified paradigm on developing and applying the artificial intelligence technology that learns and applies knowledge like humans.

This project provides an integrated and unified paradigm on how to integrate human and machine learning, knowledge-application, and interconnectivity capabilities to vastly increase and improve what humans can achieve via learning, knowledge application, and interacting with intelligent machines and other humans.

This project provides the scientific basis for creating the human world in which human-and-technological learning and knowledge-application capabilities are fundamentally integrated to maximize what humans and machines can accomplish together via learning and knowledge application for greater progress and advancement of humankind and machinekind.

Broader Impacts

During development and upon completion, this project will provide a body of knowledge that is essential in making humanlike artificial intelligence and robots ubiquitous in America—for expanding the American national economy by robotizing the American national economy and increasing the human worker productivity via humanlike artificial intelligence and robots.

This project makes essential contributions to enabling adding 300 million or more humanlike robot workers to the American national economy on Earth and in outer space, that are managed by human workers, for increasing the Earth and outer-space American national annual GDP to US$50 trillion and beyond, over US$25 trillion more than the pre-robotization level.

This project makes essential contributions to making cheap mental and manual labor abundant and limitless in America, on Earth and in outer space, through creating a body of necessary knowledge in ubiquitous artificial intelligence and robotics that enable humanlike artificial intelligence and robots to be used everywhere in America in all human endeavors.

Intellectual Merit

Work to Be Undertaken, Objectives and Expected Significance

"Mankind is something to be surpassed."
— Friedrich Wilhelm Nietzsche, in *Thus Spake Zarathustra*, Part I, 3.

This project is for performing a fundamental and applied research in learning and augmented intelligence with particular applications in making artificial intelligence and robotics ubiquitous in America and elsewhere in the First World, and doubling the American national annual GDP to US$50 trillion and beyond via robotizing the American national economy.

Allen Young, the principal investigator of this project, is a transhumanistic Asian-American man who publicly promotes and advances the science, technology, and capitalism of artificial intelligence, robotics, human immortality biotech, neurotech, nanotech, and interplanetary, interstellar, and intergalactic mass-scale outer space humanity expansion tech—according to his America and First World transhumanization plan that he has envisioned, documented and published in his book, *The Future: How artificial intelligence, robotics, human body biotech, and mass-scale outer space tech will alter the human reality*.

Successfully completing this project is an essential part of accomplishing Allen Young's paramount mission of transhumanizing America and the rest of the First World.

This project is for Allen Young to develop and publish a textually specified **integrated model of how humans learn and apply knowledge**, and how technology accelerates human learning and knowledge application, for **application in developing humanlike artificial intelligence and robot technologies** that learn, apply, express, document and communicate knowledge in humanlike ways to benefit humans and increase human worker productivity.

This project is for Allen Young to contemplate, research, textually document, and publish his **questions and answers in human learning and knowledge applications mechanism**, and to develop and publish a textually specified **model of human learning and knowledge application**—for better understanding and improving how humans learn and apply knowledge, and for creating AI and robots that learn and apply knowledge like humans.

This project is for Allen Young to create a **written specification that links and integrates human biology, human sensory information processing, human learning and knowledge-application faculties and capabilities, technology-based human knowledge learning and application, machine information processing, and machine learning and knowledge application**—for enabling humans to learn and apply knowledge better, and for creating AI and robots that can learn and apply knowledge like humans.

The ultimate objective of this project is producing and publishing a book or book-series project final work product, tentatively titled "Human and Humanlike Learning and Knowledge-Application Science and Technology for Making Humanlike AI And Robots Ubiquitous in America and Elsewhere in the First World", that contains all the project results.

The one or more **human and humanlike learning and knowledge-application paradigms and technology development strategies** developed, textually documented, and published in this project by Allen Young will be implemented in one or more subsequent projects by Allen Young for **making humanlike artificial intelligence and robots ubiquitous in America** and elsewhere in the First World, and increasing the American national annual GDP on Earth to US$50 trillion and beyond by robotizing the American national economy through adding 300 million or more humanlike robot workers that are managed by the American human workers to the American national economy on Earth, and adding even more robot workers in outer space later on after Allen Young completes his artificial nuclear-fusion reactor powered constant-acceleration interplanetary spaceship propulsion system as specified in his book, *The Future: How artificial intelligence, robotics, human body biotech, and mass-scale outer space tech will alter the human reality*.

This project aims to achieve all of the following objectives.

1. **Human learning and knowledge-application model development, textual specification, and publication.** Observe, meditate, reason, research, textually specify, and publish what humans learn, how humans learn, and how and why humans apply knowledge or what they have learned.
   1.1. Textually specify and publish what humans learn through their human-body visual, aural, tactile, olfactory, and gustatory sensory information processing; textually specify and publish what the human multisensory information processing system does within an environment when it perceives humans and nonhuman objects. Textually specify and publish one or more human visual, aural, tactile, olfactory, and gustatory information processing models for replicating in machines (artificial intelligence and robots) the human visual, aural, tactile, olfactory, and gustatory information processing and application capability and behaviors (by using one or more biosensors to detect olfactory and gustatory information, for example).
   1.2. List, textually document, and publish the types of information that humans extract and use in human sensory information processing, such as associating spatial information with smell or taste (i.e. multi-sensory place or locale information processing, encoding, remembrance, recall, and application). Also textually specify and publish how the different types of extracted human multi-sensory information are used by humans, can be used to improve human learning and knowledge application, and can be replicated in machines.
   1.3. Textually model (i.e. specify in writing) and publish how humans utilize their processed sensory information beyond simple remembrance and recognition and recall, and perform complex reasoning with their processed, categorized, remembered, recognized, and recalled sensory information—and ultimately translate what they have learned to their behaviors. Textually specify and publish how and why humans perform mental reasoning with spatial and temporal and logical considerations, categorization or classification, analysis, deduction, synthesis, induction, association, causation determination, and linguistic tokenizations and expressions. Textually specify and publish how and why humans learn, mentally design expressions and solutions in all the different human behavior dimensions (social, economic, sexual, political, competitive, collaborative, creative, and procreative), make decisions involving a multitude of

factors, and solve problems using intuition and knowledge application. Textually specify and publish what human intuition is.

1.4. Textually specify and publish what humans learn through recognition, reasoning, emotions, behavioral impulses, and social and cultural conditioning. Also, textually specify and publish the individual differences in learning within the same environment or context; for example, textually answer and publish why some people pay attention to different things and pursue different interests even within the same environment (for example, by looking into the studies done on the life choices of one or more pairs of identical twins with each pair of twins having an identical human genome). Consider and publish in writing the human genetic and environmental influences on learning, and textually document and publish the questions to answer in behavioral human genetics, such as which human genes affect the human sensory information processing and application, and interest formation; textually list and publish the human genes to identify that affect human sensory information processing and learning. Textually specify and publish the human genes to identify and the human physiological structures and processes (such as the human brain structures and processes) that determine the human learning, knowledge application, and intelligence. Textually specify and publish the linkage between the applicable human genes and physiological structures and processes, and the human mental reasoning with spatial and temporal and logical considerations, categorization or classification, analysis, deduction, synthesis, induction, association, causation determination, and linguistic tokenizations and expressions.

1.5. Textually specify and publish how and why humans perceive, categorize, and strive to solve what they perceive as different issues, challenges, difficulties, and problems in different domains or categories.

1.6. Textually specify and publish a set of definitions of and differences between instant learning, short-term learning, and long-term learning (that takes years or even decades), especially their time and complexity differences in detecting the underlying patterns to process, learn, recognize, understand, express, and apply. Textually specify and publish what 'understanding' means in terms of human knowledge learning and application. Textually specify and publish how repetitive human endeavors and experiences (such as creating new ideas, trial and error, and discovering patterns) result in learning, particularly in long-term persistent learning (such as a multiyear or multidecadal research). Textually specify and publish how learning can be accelerated via faster, more intense, and more extensive exposure to the issues and problems in all of the social, economic, sexual, political, competitive, collaborative, creative, and procreative human behavior dimensions (such as in challenging human circumstances); textually specify and publish how, why, when, and by whom the widespread technological connectivity accelerates collective human exposure, experience, learning, and knowledge application.

1.7. Textually specify and publish what, how, and why humans learn as individuals and group members, as collaborative and collective learning and knowledge-application units that pursue their interests, especially via the unprecedented speed and scale of technological connectivity. Textually specify and publish how the interconnected information technology has enabled disconnected, distributed and widespread group learning via the Internet.

1.8. Textually specify and publish what humans achieve by learning and knowledge application (in social, economic, sexual, political, competitive, collaborative, creative, and procreative human behavior dimensions). Textually model and publish the textual model on how humans form and achieve goals via sensory information processing, with the types of sensory information extracted and used for furthering the human interests in social, economic, sexual, political, competitive, collaborative, creative, and procreative human-behavior dimensions.

1.9. Identify, textually specify, and publish what humans are genetically designed to do as a collective social species, through performing their intergenerationally repetitive human behaviors throughout all human generations; textually specify and publish the perpetual and recurring human problems in the social, economic, sexual, political, competitive, collaborative, creative, and procreative human behavior dimensions—that humans solve by learning and knowledge application; textually specify and publish the mechanisms, paradigms and processes that the human brain uses to solve the perpetual and recurring human problems in the social, economic, sexual, political, competitive, collaborative, creative, and procreative human behavior dimensions; textually model and publish—down to the human-body organic, tissular, cellular, molecular, atomic, and subatomic levels—how and why the human brain solves the perpetual and recurring human problems in the social, economic, sexual, political, competitive, collaborative, creative, and procreative human behavior dimensions; textually model and publish the architecture, features, processes, and algorithms of the computational biotechnology that can model, analyze, simulate, and predict (MASP) the human-brain problem solving biophysical processes down to the human-body organic, tissular, cellular, molecular, atomic, and subatomic levels—with differing degrees of human-problem complexities and difficulties, from primitive to highly advanced. Textually specify and publish how human learning and knowledge application achieve the genetically designed human existential objectives such as human individual role finding and development within the human society. Textually specify and publish how humanlike artificial intelligence can identify, and aid humans to do more of in better ways, what humans are genetically designed to do as individuals and as a collective social species.

1.10. Identify, textually specify, and publish in writing how and why humans learn, apply knowledge, and adapt their behavior and phenotypic and behavioral genes due to their environmental human-behavior evolution pressures such as wars, economic shocks, political upheavals, social frictions, and social and economic and sexual-mating competition.

1.11. Textually specify and publish the role of the human emotional reward and punishment mechanism in human learning and knowledge application. Answer in writing the following questions, and publish the questions and answers. 'Why and how the human emotional reward and punishment mechanism plays a significant, if not a decisive, role in human learning and knowledge application? When and why humans emotionally feel good or bad when they learn and apply knowledge? How can the human emotional reward and punishment mechanism in human learning and knowledge application be used in humanlike artificial intelligence and other types of information technologies to enable humans to learn and apply knowledge better, be more productive, and emotionally feel good about themselves? What neurochemicals, human genes, and other human-body components are involved in the human emotional reward and

punishment mechanism in human learning and knowledge application? How does the human emotional reward and punishment mechanism work at the human-body organic, tissular, cellular, molecular, atomic, and subatomic levels?'

1.12. Textually model and publish how and why human sensory information processing, learning, and knowledge application happen in the human body—down to the human-body organic, tissular, cellular, molecular, atomic, and subatomic levels—by using existing biology and neuroscience knowledge (such as the numbers of the photoreceptor cells in the human retina and the receptor cells in the non-vision human sensory systems, the number of the human-brain neurons, and the three-dimensional distributions and densities of neurons in the different regions of the human brain), asking and answering relevant questions in writing and publishing the questions and answers, and developing and textually documenting and publishing relevant new ideas and concepts and paradigms. Quantify and publish the human biological energy use in human sensory information processing, learning, and knowledge application; compare the human-brain information processing energy use to the personal computer multimedia (visual, aural, and textual) information processing energy use in wattage and calorie consumption rate; characterize the human and computer information processing and application complexities and efficiencies in terms of the human and computer information-processing energy uses. Question and answer in writing the human visual, aural, tactile, olfactory, and gustatory information extraction, encoding, storage, retrieval, recognition, and application mechanisms—at the human-body organic, tissular, cellular, molecular, atomic, and subatomic levels especially in the human brain—in the best way possible using the existing biology and neuroscience knowledge, and the new knowledge especially new paradigms created in this project by Allen Young, the principal investigator of this project; publish the questions and answers. Textually specify and publish the questions to be answered in the human-brain multisensory information processing and application mechanisms. Develop, textually specify, and publish one or more paradigms for applying the human-brain multisensory information processing and application mechanisms in artificial intelligence and robots for replicating the human sensory information processing, learning, and knowledge application in artificial intelligence and robots.

1.13. Identify, textually specify, and publish how and why the differing individual human genetics affect individual human interest, learning, and knowledge application (e.g. the human genes that affect the human-brain neuron firing rates).

1.14. Textually specify and publish what humans perceive as intelligent and unintelligent. Using the specified human perceptions of intelligence and unintelligence, textually specify and publish what human intelligence is, and what human intelligence features and properties are. Textually specify and publish what the human learning and knowledge application are within the context of the human intelligence design.

1.15. Textually specify and publish, in qualitative and quantitative terms, how the emergent intelligence of groups, organizations, and networks intersects with processes of learning, behavior and cognition in individuals—down to the human-body organic, tissular, cellular, molecular, atomic, and subatomic levels.

1.16. Textually specify and publish the human visual, aural, spatial, temporal, logical, emotional, and linguistic information processing and application capabilities—down to the human-body organic, tissular, cellular, molecular, atomic, and subatomic levels.

1.17. Textually answer the following questions in the NSF grant opportunity description, and publish the answers—down to the human-body organic, tissular, cellular, molecular, atomic, and subatomic levels. "What are the underlying mechanisms that support transfer of learning from one context to another or from one domain to another? How is learning generalized from a small set of specific experiences? What is the basis for robust learning that is resilient against potential interference from new experiences? How is learning consolidated and reconsolidated from transient experience to stable memory?"

1.18. Textually answer the following questions in the NSF grant opportunity description, and publish the answers—down to the human-body organic, tissular, cellular, molecular, atomic, and subatomic levels. "How can we integrate research findings and insights across levels of analysis, relating understanding of cellular and molecular mechanisms of learning in the neurons to circuit and systems-level computations of learning in the brain, to cognitive, affective, social, and behavioral processes of learning? What is the relationship between assembly of new networks (development) and learning new knowledge in a maturing/mature brain? What concepts, tools (including Big Data, machine learning, and other computational models), or questions will provide the most productive linkages across levels of analysis?"

2. **Human learning and knowledge-application model application paradigms development, textual specification, and publication**

2.1. Develop, textually specify, and publish one or more requirements, features, paradigms and development strategies of the artificial intelligence technology that learns and applies knowledge like humans in all the different human behavior dimensions (social, economic, sexual, political, competitive, collaborative, creative, and procreative), with humanlike visual, aural, spatial, temporal, logical, emotional, and linguistic information processing and application capabilities. Develop, textually specify, and publish how machines can perform humanlike mental reasoning (or advanced information processing) with spatial and temporal and logical considerations, categorization or classification, analysis, deduction, synthesis, induction, association, causation determination, and linguistic tokenizations and expressions. Develop, textually specify, and publish how intelligent machines can self-modify and self-improve via learning and knowledge application with optional human inputs.

2.2. Textually specify and publish how people and technology working together in new ways and at scale can achieve more than either can attain alone.

2.2.1. Textually specify and publish, in qualitative and quantitative terms—down to the human-body organic, tissular, cellular, molecular, atomic, and subatomic levels—what humans can and will accomplish—in all of the social, economic, sexual, political, competitive, collaborative, creative, and procreative human behavior dimensions—when humans are aided by hyper-intelligent machines that learn and apply knowledge like humans; include all the different economic classes of human workers in this consideration. Textually model and publish how individual and collective human behaviors and genetics will evolve in developed and developing nations, especially in America and elsewhere in the First World, when artificial intelligence reaches the so-called technological singularity and becomes capable of imitating or replicating the human learning and knowledge-application capabilities to the uttermost extremes, and when individual human beings can learn and

accumulate knowledge forever without death via using the human immortality biotech, and when human intelligence capabilities can and will be directly and instantly modified and upgraded via human body part and whole human body manufacturing and replacement biotech, human genetic engineering, neurotech, synthetic biology, and bionic biotech, and when the boundaries between human and machine capabilities and hardware will blur and merge at the most fundamental functional and physical levels.

2.2.2. Design, textually specify, and publish one or more paradigms for integrating human biology, human sensory information processing, and machine information processing, in learning and knowledge application—for enabling humans to learn and apply knowledge better, and creating artificial intelligence and robots that can learn and apply knowledge like humans. For example, textually identify, specify, and publish the human visual, aural, tactile, olfactory, and gustatory learning and knowledge-application capabilities and features that are to be implemented in artificial intelligence and robots for artificial intelligence and robots to visually, aurally, tactilely, olfactorily, and gustatorily learn and apply knowledge like humans, and aid humans to learn and apply knowledge better, perform tasks better, and create new human experiences.

2.2.3. Develop, textually specify, and publish one or more paradigms for collaborative technologies that help humans to solve human problems, enable humans to interact with other humans in much more complex ways, improve human learning, improve human expression and solution design, and improve complex human decision-making and problem-solving processes and capabilities—by having and using the capabilities to learn to adapt to the humans that they interact with, by considering the human behavioral and physical traits, and by adjusting through learning the technological information processing and reasoning processes to the individual humans that they interact with, while broadly considering the human behavior and physiology designs. For example, specify in writing the role and functional capabilities of an artificial intelligence psychologist, consultant, or counselor for the human clients who experience various problems and challenges in their lives.

2.2.4. Develop, textually specify, and publish one or more integrated and unified learning and knowledge-application models with humans, AI, and robots involved and integrated all together. Textually specify and publish how learning and knowledge-applying humans, artificial intelligence systems, and robots can all work together by learning and applying knowledge, to benefit humans. Especially consider the speedup of human mental reasoning processes via using hyper-advanced artificial intelligence systems that are aware of the human design and how humans function.

2.2.5. Textually specify and publish how humans can learn and apply knowledge on using robots when robots with humanlike mental and manual capabilities are ubiquitous; especially consider and factor in the human tendency and psychology to benefit themselves.

2.2.6. Develop, textually specify, and publish how the artificial intelligence with humanlike learning and knowledge-application capabilities can and will enable increased human-to-human, human-to-machine, and machine-to-machine

interconnectivity to increase the overall capability and capacity of humans and machines.

2.2.7. Answer in writing the question, "How can human learning and knowledge application be improved via humanlike AI and robots, and create a greater human socioeconomic benefit and productivity?" Publish the question and answer.

2.3. Develop, textually specify, and publish one or more paradigms on how human cognitive function can be augmented through interactions with others, contextual variations, and technological advances, particularly in artificial intelligence, human intelligence genetic engineering, and neurotechnology. Textually identify and publish the human genes that can be genetically engineered to augment human cognitive function, such as sensory information processing human genes; textually identify and publish the neurotechnological capabilities that can augment human cognitive function.

2.3.1. Develop, textually document, and publish one or more paradigms for applying this project's results in augmenting the complexity of interhuman interactions.

2.3.2. Develop, textually document, and publish one or more paradigms for applying this project's results in using contextual variations to augment human cognitive function.

2.3.3. Develop, textually document, and publish one or more paradigms for applying this project's results in developing one or more neurotechnologies that inject memory and knowledge directly into the human brain, and directly read memory and knowledge in the human brain, for transferring memory and knowledge directly into, from, and between human brains.

2.3.4. Using the human learning and knowledge-application model developed in this project, contemplate, textually document, and publish what will happen in humanity when every human being in America and elsewhere in the First World gets hyper or genius-level intelligence via human genetic engineering and/or neurotechnology.

2.3.5. Using the human learning and knowledge-application model developed in this project, contemplate, textually document, and publish what will happen in humanity when every human being in the entire humanity gets hyper or genius-level intelligence via human genetic engineering and/or neurotechnology.

2.4. Textually answer the following questions in the NSF grant opportunity description, and publish the answers. "How do human interactions with technologies, imbued with artificial intelligence, provide improved human task performance? What models best describe the interplay of the individual and collaborative processes that lead to co-creation of knowledge and collective intelligence? In what ways do the capacities and constraints of human cognition inform improved methods of human-artificial intelligence collaboration?"

2.5. Textually answer the following questions in the NSF grant opportunity description, and publish the answers. "How can insights from biological learners contribute and derive new theoretic perspectives to artificial intelligence, neuromorphic engineering, materials science, and nanotechnology? How can the ability of biological systems to learn from relatively few examples improve efficiency of artificial systems? How do learning systems (biological and artificial) address complex issues of causal reasoning? How can knowledge about the ways in which humans learn help in the design of human-machine interfaces?" When answering these questions, especially consider the human

multisensory information processing and how it translates to human learning and knowledge application, and human behavior.

3. **Project results productization and commercialization strategy development, textual documentation, and publication.** Develop, textually specify, and publish one or more strategies for productizing and commercializing the scientific and technological results of this project with humanlike learning and knowledge-applying intelligent machines that aid and support entrepreneurs, managers, and rank-and-file human workers to create greater and more diverse human economies and human experiences, and also aid the U.S. military personnel to increase the U.S. national defense and offence capabilities. Design, textually specify, and publish one or more paradigms of an economy with learning and knowledge-applying humans and intelligent machines that humanlike artificial intelligence and robot products, one or more right commercialization strategies, and applicable or suitable economic policies and campaigns can create to create much more diverse and brand-new human experiences. Design, textually specify, and publish one or more paradigms of the U.S. military with humanlike learning and knowledge-applying intelligent machines that aid and support the U.S. military personnel to increase the U.S. national defense and offence capabilities.

The successful completion of this project is absolutely required in understanding how humans learn and apply knowledge at the human-body organic, tissular, cellular, molecular, atomic, and subatomic levels, and in making artificial intelligence and robots with humanlike learning and knowledge-application capabilities ubiquitous in America and elsewhere in the First World for doubling the American national annual GDP to US$50 trillion and beyond; as such, the **expected significance** of completing this project is making an absolutely essential contribution to **enabling humans to learn and apply knowledge better via intelligent machines, enabling machines to learn and apply knowledge like humans to benefit humans, making artificial intelligence and robots with humanlike intelligence ubiquitous in America and elsewhere in the First World, and doubling the American national annual GDP to US$50 trillion and beyond on Earth by robotizing the American national economy on Earth**.

Relationship to Other Works

Unlike any other work, this comprehensive research project on human learning and knowledge application is for making AI and robots ubiquitous in America and elsewhere in the First World, and researching the human learning and knowledge application far beyond the macroscopic observational level, down to the organic, tissular, cellular, molecular, atomic, and subatomic level human biology.

This project uniquely integrates human learning and knowledge-application modeling, related human biology, and application to ubiquitous artificial intelligence and robotics.

All the work Allen Young does, including this project, is for achieving Allen Young's publicly stated goal of transhumanizing the human species according to his plan specified in his book, *The Future: How artificial intelligence, robotics, human body biotech, and mass-scale outer space tech will alter the human reality*.

Transhumanism is removing the human intelligence limit, removing the human manual labor limit, removing the human lifespan limit, and removing the human limit in being confined to Earth. Transhumanism is advancing artificial intelligence, robotics, biotech, nanotech, neurotech, and outer-space tech—for enabling humans to have access to limitless human or humanlike intelligence, limitless human or humanlike manual labor, limitless human lifespan, and limitless human presence in the Universe.

This project, along with Allen Young's other artificial intelligence and robotics projects, contributes to achieving Allen Young's publicly stated goal of making artificial intelligence and robots ubiquitous in America, and doubling the American annual GDP to US$50 trillion, US$25 trillion more than the pre-robotization level, by adding 300 million or more robot workers to the American national economy, that are managed by human workers.

In particular, this project relates to enabling humans to learn and apply knowledge better via intelligent technologies, and enabling machines to learn and apply knowledge like humans to benefit humans.

General Plan of Work

The ultimate objective of this project is producing and publishing one or more books that contain all the project results with all the answers, relevant information, paradigms, models, process specifications, and further research and development (R&D) plans, that achieve all the project objectives. As such, the entire project focus is on producing and publishing the final work-product book(s); all the work in this project is centered on achieving this ultimate project objective.

Allen Young, the principal investigator (PI) of this project, will perform this project according to the following process.

1. Create in writing the outline(s) of the book(s), while considering all the factors, concerns, and questions to be answered in this project. Do whatever needed background research online while writing out the book outline(s), taking notes of all the necessary third-party information and its sources, and of all Allen Young, the principal investigator's own ideas.
2. Develop all the necessary concepts and models, design and perform all the required thought experiments, and answer all the questions, all in writing, as the book contents that achieve all the project objectives and provide the expected significance. Also, regularly produce and publish online audiovisuals, using the completed or in-progress book contents, to inform and share with the public the project progress.
3. Review and complete all the book contents.
4. Publish the book(s).

Success Criterion and Benefits

Allen Young, the principal investigator of this project, does not know exactly what results will have been produced at the conclusion of this project, since this is a research project that will produce **never-before-existed knowledge**; but he is confident that he will manage to achieve all the project objectives.

Allen Young, the principal investigator of this project, will determine this project to be a success when all the textually specified objectives earlier are accomplished.

When this project gets successfully completed, it will yield the **benefit** of having textually specified human learning and knowledge-application paradigms and technology development strategies published in one or more books, that will be used in understanding how humans learn and apply knowledge at the human-body organic, tissular, cellular, molecular, atomic, and subatomic levels, and making artificial intelligence and robots with humanlike learning and knowledge-application capabilities ubiquitous in America and elsewhere in the First World for increasing the American national annual GDP to US$50 trillion and beyond.

Broader Impacts

Broad Economic Impact

This project is a necessary component in universalizing artificial intelligence and robots in America and the rest of the First World—making artificial intelligence and robots essential to the human existence and daily lives—with the particular application in doubling the American annual GDP to US$50 trillion, by making artificial intelligence and robots ubiquitous in the American national economy.

This project contributes to creating unlimited supplies of cheap mental and manual labor via humanlike artificial intelligence and robots in America, and robotizing mining, manufacturing, and construction in America, on Earth and in outer space.

One major economic consequence Allen Young, the principal investigator of this project, aims to create through advancing AI and robotics is having 100 to 200 million robots working in the American factories on Earth, managed by human robot-managers.

Allen Young expects America to have as many working robots as twice the number of the American human workers, 320 million or more, to increase the American annual GDP to US$50 trillion and beyond.

Allen Young expects that in the robotized American national economy, the American human workers will manage exceedingly capable artificial intelligence and robots to at least double the total American national economic outputs from the pre-robotization level.

This project contributes to creating the robotized American national economy, by making artificial intelligence and robots to learn and apply knowledge like humans to be useful to humans in all human endeavors.

There are three major issues and problems in manufacturing globally.

There is the need to innovate and strengthen the American national manufacturing capability, capacity, and diversity, on Earth and in outer space.

There is the global limit or cap on the total supply of human factory workers. Presently, in AD 2022, the global manufacturing systems have already exhausted a significant portion of the global supply of cheap human factory workers.

There is the need of humanity to expand into outer space in massive scale, for securing more resources and space for humanity; there is the need to have astronomical numbers of robot laborers in outer space to serve the human interests in outer-space mining, construction, manufacturing, and service.

Advancing artificial intelligence and robotics will address and solve all of the above major issues and problems in manufacturing and humanity expansion.

This project contributes to solving the human labor supply limitation problem on Earth and in outer space via enabling ubiquitous robotics with humanlike knowledge learning and application.

This project is a part of the essential work that must be done to achieve Allen Young's aim of exponentially increasing the mining, raw materials processing, manufacturing, and construction capabilities in America and elsewhere in the First World, at first on Earth, and eventually in outer space.

Allen Young deems that in order to make artificial intelligence and robots ubiquitous in America, robotize the American national economy, and hence double the American annual GDP to US$50 trillion, US$25 trillion more than the pre-robotization level, the following must be achieved.

In order for robots to be ubiquitous, robots must be able to see like humans, process visual information in humanlike ways to visually plan and execute navigation and object manipulation in humanlike ways. Moreover, through advances in artificial intelligence, robots must increasingly think and solve problems like humans, especially visually.

In order for robots to be ubiquitous, robots must be made of artificial or synthetic bones, muscles, tendons, ligaments, skins, nerves, ion liquid energy channels, and malleable batteries—not of motors, wires, plastics, metals, and solid-casing batteries—for enabling robots to perform any and every physical task that humans can.

In order for robots to be ubiquitous, the activities that humans will perform using the versatile and high-dexterity robots must be designed and mass-marketed.

This project contributes to enabling machines to learn and apply knowledge, and think and solve problems like humans.

Advancing artificial intelligence and robotics for creating human-like visual capabilities and dexterity requires far more advanced and complex modeling, analysis, simulation, prediction, and understanding of how the human visual recognition, visual data storage, visual reasoning, visual motion planning, visual motion execution, dexterity, and creativity work. As such, this

project contributes to replicating in machines the human sensory information processing, reasoning, motion planning, and motion execution capabilities—so that humans can have access to more humanlike machine capabilities for their use.

The broadest impact of this project is contributing to benefiting the public, consumers, businesses, industries, and institutions, initially in America and elsewhere in the First World, and then eventually in developing nations—through advancing and commercializing humanlike artificial intelligence and robotics technologies.

This project contributes to advancing artificial intelligence and robotics for creating far-reaching socioeconomic transformations in America and elsewhere; this project contributes to creating humanlike artificial intelligence and robotics technologies with humanlike visual and dexterity capabilities that will revolutionize and reinvigorate the American manufacturing, vastly increase the manufacturing productivity, capability, capacity, and output in America and elsewhere in the First World, and create vastly increased net material wealth across the entire humanity.

This project contributes to addressing the supplies of human factory workers having reached their limits and caps at the global level, even in the most populous nations like China; this project contributes to creating artificial intelligence and robotics technologies with humanlike visual and dexterity knowledge learning and application capabilities that will alleviate and permanently remove the factory worker shortage problems in America and elsewhere.

Moreover, this project contributes to creating the artificial intelligence and robotics technologies with humanlike visual and dexterity knowledge learning and application capabilities that can be used in outer space in massive numbers, for mass-scale outer space mining, manufacturing, construction, and mass-scale human habitat building and maintenance—for enabling interplanetary mass-scale outer space humanity expansion in the Solar System.

Constant supply of cheap manual labor is necessary for creating and sustaining abundant material wealth. The human world has been running out of abundant cheap manual labor supply due to the human-worker wage increases, rising standards of human living, and continuous socioeconomic developments in the world.

In order to create even more abundant material wealth in the future, not just on Earth but in outer space as well, there must be even more constant supply of cheap manual labor. However, over two centuries of industrialization have been maximizing the use of cheap human manual labor across the world, and at this point in time, in AD 2022, the global supply of cheap human manual labor has been running out, and the increase in human-worker wages and shortages, and inflation is in widespread effect.

Advancing artificial intelligence and robotics for providing unlimited supply of cheap mental and manual labor for providing abundant material wealth to human beings, not just on Earth but in outer space as well, is not only the proper approach to permanently solve the constant cheap mental and manual labor supply constraint problem, but also the only approach available.

For further socioeconomic development and advancement, America and the rest of the First World, must advance and embrace the artificial intelligence and robotics technologies that will provide virtually unlimited supply of cheap mental and manual labor on Earth and in outer space—for removing human mental and manual labor limitations and improving the human condition, for building and maintaining more advanced human habitats not just on Earth but in outer space as well. America and the rest of the First World must place astronomical numbers of robots working in outer space to support human life in outer space, with millions of humans living in each outer-space city, not just a few people living in an outer-space human habitat.

Providing unlimited supplies of cheap and abundant artificial intelligence systems and robots for mental and manual labor that can perform the mental and manual tasks that only humans could, will create enormous material wealth for humans on Earth and in outer space, particularly for America and the rest of the First World.

In the not-too-distant future, humans shouldn't be doing boring, redundant, and mechanical jobs at all; eventually, humanlike artificial intelligence and robots that are managed by human workers, should do all the robotic mental and manual work, and human workers should specialize even more in doing the jobs that require human taste and judgment, for creating even greater human possibilities, promises, and prosperity. There must be advanced artificial intelligence and robots, so that robots can do all the robotic work, and humans can be more human and do more of humanly work.

This project contributes to advancing artificial intelligence and robotics for broadening the human capabilities, possibilities, and prosperity for the human multitudes, particularly in America and elsewhere in the First World.

This project contributes to advancing artificial intelligence and robotics for dramatically cheapening the mental and manual labor cost through using humanlike artificial intelligence and robots, and increasing the mining, manufacturing, and construction capabilities in America and elsewhere in the First World, on Earth and in outer space.

AI-enablement and Robotization of the U.S. Military

Robocentric, Allen Young's American high-tech corporation, plans and executes being a military artificial intelligence and robotics technology supplier to the U.S. military and the U.S. ally militaries, by providing advanced artificial intelligence and robotics software and hardware products for military defense and offence. Robocentric aims to strengthen the U.S. military capabilities through the U.S. military AI-enablement and robotization. This project aims to provide a set of scientific bases and technology paradigms that will be used in creating artificial intelligence and robot technologies that learn and apply knowledge like humans that Robocentric will market to the U.S. and U.S. ally militaries.

About Robocentric

Robocentric is an American high-tech corporation that publicly promotes and advances the science, technology, and capitalism of artificial intelligence, robotics, human immortality biotech, and interplanetary, interstellar, and intergalactic mass-scale outer space humanity expansion tech.

Building Robocentric—for advancing artificial intelligence, robotics, human immortality biotech, and interplanetary, interstellar, and intergalactic mass-scale outer space humanity expansion tech via R&D and commercialization—is a multidecadal commitment of Allen Young.

NOTICE Robocentric Biotech is not a conventional bioscience laboratory or R&D facility or biomedical research institution: Rather, Robocentric Biotech is a sensor, scanner, modeler, designer, synthesizer, and replacer biotech R&D and commercialization business with a long-term (multidecadal) aim of developing and commercializing its own human immortality biotechnologies. Robocentric does not breed or produce laboratory animals, such as laboratory mice, for developing its biotech. Robocentric doesn't do genetically engineered plant and animal production unless it is for testing its own genetic engineering biotech. Robocentric doesn't do testing on live animals except for clinical trials for testing its own human or nonhuman disease cure or for testing its own sensor and scanner biotech. Robocentric Biotech's main strategy is developing and commercializing its own biomatter synthesizer biotechnologies for biomanufacturing biochemicals, biomolecules, monomers, polymers, cell components, cells, tissues, organs, organ systems, whole bodies, consumer and industrial biomaterials and pseudo-biomaterials such as artificial cells and tissues and cell-like systems, and bioelectronic devices: Robocentric Biotech's key focus is developing and commercializing its own biomatter synthesizer technologies, not breeding animals and plants, not performing incremental bioscience researches. Robocentric performs testing on live and dead animal and plant biomatter (such as cells, tissues, and organs), only when it is absolutely necessary for developing and testing its own biotechnologies. Robocentric Biotech is led by Allen Young, a college dropout.

Read *The Future*, the book written by Allen Young, the transhumanistic Asian-American man, that explains how Allen Young and his transhumanistic American high-tech corporation, Robocentric, advance AI, robotics, human immortality biotech, and mass-scale outer space humanity expansion tech. Visit Robocentric.com/Future to learn how AI, robotics, human immortality biotech, and mass-scale outer space humanity expansion tech will alter the human reality! Be special: Be in the know in advancing transhumanism by visiting Robocentric.com/Future and reading *The Future*!

Robocentric needs investors for advancing AI, robotics, human immortality biotech, and mass-scale outer space humanity expansion tech! Allen Young, the transhumanistic Asian-American man, a college dropout, Robocentric CEO is currently working on commercializing the AI and robotics technologies that he has developed. Robocentric is seeking investors for bringing the next-generation AI and robotics technologies to the market. Investing in Robocentric comes with unconditional remaining investor money return via share buyback at the purchase price. Visit Robocentric.com/Investors for more info and to invest in Robocentric!

In order to advance the science and technology and capitalism in artificial intelligence, robotics, human immortality biotech, and mass-scale outer space humanity expansion tech—for doubling the American national annual GDP to US$50 trillion and beyond by fully robotizing the American national economy on Earth, and sextupling the American national annual GDP to US$150 trillion and beyond by fully transhumanizing the American national economy on Earth

and in outer space—Robocentric, the transhumanistic American high-tech corporation, performs a number of its own science and technology research projects under Allen Young's leadership. Visit Robocentric.com/Projects to learn about the transhumanistic science and technology researches that Robocentric performs under Allen Young's leadership, before making the decision to invest in Robocentric at Robocentric.com/Investors.

If you're an investor, visit Robocentric.com/PitchDeck to learn about Robocentric's overall business plan for advancing transhumanism in America and elsewhere in the First World. Advancing artificial intelligence, robotics, human immortality biotech, and mass-scale outer space humanity expansion tech needs your support. You can support advancing AI, robotics, human immortality biotech, and mass-scale outer space tech by investing in Robocentric through purchasing one or more Robocentric stocks at Robocentric.com/Investors. You can provide support by making one or more donations at Robocentric.com/Donation. You can provide support by purchasing one or more merchandise items at Robocentric.com/Merchandise.

If you want to contact Allen Young, the transhumanistic Asian-American man, Robocentric CEO, for business related issues or investing in Robocentric for advancing AI, robotics, human immortality biotech, and mass-scale outer space humanity expansion tech, visit Robocentric.com/Contact.

Allen Young, the transhumanistic Asian-American man, Robocentric CEO, is looking for people to work with! Currently, Allen Young is working on getting the initial funding for Robocentric, so there's no immediate open positions. But in the future, there will be. If you’re interested in working on advancing AI, robotics, human immortality biotech, and/or mass-scale outer space humanity expansion tech, visit Robocentric.com/Jobs.

If you want to know more about Allen Young, the transhumanistic Asian-American man, Robocentric CEO, who publicly promotes and advances the science, technology, and capitalism of artificial intelligence, robotics, human immortality biotech, human genetic screening and engineering biotech, nanotechnology, neurotechnology, bionic biotech, and interplanetary, interstellar, and intergalactic mass-scale outer space humanity expansion tech, visit Robocentric.com/Bio for Allen Young’s biosketch and autobiography.

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