

Summer 2026 - Fall 2026 Awards List

Proposal #	Application Name / Applicant	Institution	Project Summary	Category	Vendor Chosen	Award Amount	Awardee	Department
2.11	Visualizing Manifold Learning Distortion	Connecticut College	Students at Connecticut College's informatics lab will build new visualization tools that reveal the distortion introduced when high-dimensional data is compressed into 2-D maps using techniques like UMAP and t-SNE, so hidden warping in the reduced view becomes visible. They will benchmark the methods on a large single-cell timeseries dataset and develop a chatbot prototype that explains the visualizations to users. Deliverables include open-source code and data, a final model, and a publication.	Capstone Senior Design (2.1)	GCloud	\$4,500.00	Timothy Becker	Computer Science
2.13	AI-Powered Traffic Video Analysis	Trinity College	This Trinity College project uses computer vision (YOLOv8-style object detection) to analyze traffic and security camera footage in Hartford, flagging vehicles, pedestrians, cyclists, traffic violations, and near-miss incidents to improve street safety and walkability. An LLM component turns the detection results into plain-language reports for city planners and public safety staff. Now in its second year with Cisco and NVIDIA, the pipeline blurs faces and license plates and does no individual identification.	Capstone Senior Design (2.1)	GCloud	\$3,500.00	Kenneth Kousen	Department of Computer Science / Hartford AI Center, Entrepreneurship Center
2.14	AI-Driven Sector Anomaly Investing System	Central Connecticut State University	Finance capstone teams at Central Connecticut State University will build an AI system that uses natural language processing to read academic finance journals, extract documented stock-return anomalies, and turn them into sector-specific stock-screening rules. Each team tests its anomalies against market data from 1990 to 2025, backtests the resulting strategy, and builds a prototype that automatically rebalances a portfolio each quarter. The goal is hands-on experience turning published research into a working AI-driven investment tool.	Capstone Senior Design (2.1)	GCloud	\$3,500.00	Yinfei Chen	Finance
2.15	Predictive Modeling for Smart Drug Delivery	University of Hartford	Two biomedical engineering capstone teams at the University of Hartford will apply machine learning to smart drug delivery and tissue engineering design. One team trains predictive models to estimate nanoparticle encapsulation efficiency and drug-release behavior so promising formulations can be screened digitally before costly lab trials, while the other trains deep-learning models to segment SEM images of electrospun scaffolds. Together they create a digital-twin-inspired workflow where fall computational modeling guides later experimental validation.	Capstone Senior Design (2.1)	GCloud	\$7,000.00	Solaleh Miar	Civil, Environmental, and Biomedical Engineering
2.202	Monitoring Reproductive Cycles in Animals	Fairfield University	Fairfield University researchers are testing whether the sounds animals make can reveal when they are fertile, offering a noninvasive, real-time alternative to hormone tests for endangered cats such as the Amur leopard. They train a Transformer model built from scratch on years of continuous zoo audio recordings to automatically flag estrus-related calls, work packaged into an automated tool called Felidetector that has reached over 90% accuracy in early results. The goal is to scale the system across multiple U.S. zoos (Including Connecticut's Beardsley Zoo) to support endangered-species conservation and assisted breeding programs.	Faculty & Graduate Research (2.2)	GCloud	\$3,000.00	Danushka Bandara	Computer Science
2.203	LLM for Explainable Network Traffic Analysis	Southern Connecticut State University	This Southern Connecticut State University project fine-tunes large language models to spot malicious network traffic and, just as importantly, to explain in plain language why a given connection was flagged, so security analysts can trust and act on the results. The team converts raw network-capture data into flow-level features, then adapts models, an encoder for classifying traffic and a decoder for generating explanations, first with lightweight LoRA tuning and later full fine-tuning, benchmarking the results against frontier commercial LLMs. The deliverable is an explainable intrusion-detection system and thesis research for a master's student in cybersecurity.	Faculty & Graduate Research (2.2)	GCloud	\$5,500.00	Aashma Uprety	Computer Science
2.204	VBTE: Verification Gap in Vector Databases	Trinity College	Trinity College researchers are tackling a privacy gap in the vector databases that power modern AI search and retrieval: when data is "deleted," the underlying records often remain physically recoverable. Their approach combines hardware and software safeguards. By utilizing rotating encryption keys, repairing the database's internal search graph so removed items become untraceable, and issuing a cryptographic "certificate of erasure" that outside auditors can verify. Then they are tested on GPU-based storage simulators and secure-hardware prototypes. The goal is to turn data deletion into a provable guarantee rather than an unverifiable software claim, producing publications and hands-on security training for undergraduate students.	Faculty & Graduate Research (2.2)	Unity	\$12,000.00	Chandranil Chakrabortii	Computer Science
2.206	Foundation Models for Microbiome Data	University of New Haven	University of New Haven researchers are building AI models that predict disease from the gut microbiome. The community of bacteria whose makeup has been linked to conditions from Type 2 diabetes to colorectal cancer. They train custom Transformer "foundation models" from scratch on nearly 15,000 patient samples spanning 131 diseases, designing specialized attention mechanisms that capture biologically meaningful relationships and adding techniques to handle rare diseases represented by only a handful of samples. The aim is disease classification that is both accurate and interpretable, supporting graduate research and peer-reviewed publications.	Faculty & Graduate Research (2.2)	Google	\$15,000.00	Khaled Sayed	Electrical & Computer Engineering and Computer Science

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2.207	Security of Reasoning in Modern LLMs	University of New Haven	This University of New Haven project investigates the security weaknesses that emerge when large language models reason through multi-step problems—vulnerabilities such as prompt injection, "reasoning hijacking," and leakage of a model's internal chain of thought—as these systems get deployed in high-stakes fields like cybersecurity and healthcare. The researchers build an evaluation framework that stress-tests models with adversarial prompts and simulated attacks, fine-tuning open-weight models using efficient LoRA methods and testing defenses such as reasoning verification and policy-based filtering. The work aims to produce actionable insights and standardized security benchmarks, and forms the PhD thesis research of a doctoral candidate.	Faculty & Graduate Research (2.2)	Google	\$10,000.00	Mohamad Nassar	Electrical & Computer Engineering and Computer Science
2.208	AI-Driven Microtransit for Rural CT	Central Connecticut State University	Central Connecticut State University researchers are designing an on-demand "microtransit" system for rural parts of the state, where low population density makes traditional fixed bus routes inefficient and leaves residents with few transportation options. The project pairs machine-learning demand forecasting (using time-series and Transformer models, with graph neural networks to represent the road network) with reinforcement-learning and optimization methods that route and schedule vehicles dynamically as ride requests come in. Trained on historical trip data and simulated rural scenarios, the goal is a more efficient, reliable, and accessible transit service, with results feeding publications and future grant proposals.	Faculty & Graduate Research (2.2)	Unity	\$8,000.00	Andy Chae	Construction Management
2.210	AI Wearable Safety System for Heat Stress	Central Connecticut State University	Central Connecticut State University researchers are building a wearable safety system that monitors and predicts dangerous heat stress in outdoor construction workers, so employers can respond early with measures like rest breaks, hydration, and schedule changes. The system combines physiological signals from body worn sensors including heart rate, heart rate variability, skin temperature, electrodermal activity, and movement with local weather data, then uses machine learning time series models such as LSTM and Transformer networks along with mapping tools to estimate site specific heat exposure. The goal is more accurate, localized heat stress prediction, validated through peer reviewed publications.	Faculty & Graduate Research (2.2)	Unity	\$7,000.00	Wonil Lee	Manufacturing and Construction Management/ Construction Management
2.211	Multimodal AI for Stress Prediction	Quinnipiac University	Quinnipiac University researchers are expanding a smartphone app (SmartFocus) into an AI system that predicts a person's stress levels from everyday behavioral and sensor data such as app usage, location, activity, steps, and sleep, paired with weekly self reported stress scores. The project trains deep learning models built for time series data, including LSTM/GRU and Transformer architectures, on months of data from study participants, and adds an LLM powered component to interpret results and generate personalized insights. The deliverable is a working prototype capable of continuous stress monitoring and early detection.	Faculty & Graduate Research (2.2)	Unity	\$8,000.00	Soumyashree Sahoo	Department of Computer Science
2.212	SHOT Database & LLM Interface	Western Connecticut State University	This Western Connecticut State University project builds on S.H.O.T. (Statistics Help Officer Training), a database that has documented officer involved shootings in the United States since 2009, recording dozens of incident level details and linking cases to their later civil litigation outcomes. The current phase extends the data through 2026 and adds an AI interface that lets researchers query the records in plain English, using large language models with retrieval augmented generation over source documents (police reports, court opinions, news), reranking and fact checking models to keep answers grounded, and speech to text processing for audio such as hearings. The goal is a secure, searchable database and analytics tool, released alongside an open dataset for use of force research.	Faculty & Graduate Research (2.2)	GCloud	\$9,000.00	Hasan T. Arslan	Division of Justice and Law Administration (JLA)
2.213	Li-ion Battery Degradation	Central Connecticut State University	Central Connecticut State University researchers are studying how the on and off nature of solar charging, including day and night cycles, clouds, and shadows, speeds up wear on the lithium ion batteries used in renewable energy storage, microgrids, and solar EV charging. Using a low cost bench top rig with a programmable solar simulator, they collect detailed battery cycling data (voltage, current, temperature, and impedance across hundreds of charge–discharge cycles) and train an ensemble machine learning model to predict each battery's State of Health under these real world, variable conditions. The goal is a validated, charging aware prediction model plus an open dataset and hands on training for undergraduate and graduate students, feeding into future U.S. Department of Energy grant proposals.	Faculty & Graduate Research (2.2)	Unity	\$3,500.00	Mohammad Rahman	Department of Manufacturing and Construction Management, School of Engineering, Science & Technology

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2.214	Prompt Injection Attacks in LLM Agents	Southern Connecticut State University	This Southern Connecticut State University project studies prompt injection attacks, where malicious instructions hidden inside documents, emails, or web pages can hijack an AI agent that reads them, causing wrong answers, data leaks, or unintended actions. The researchers build a realistic LLM agent, run it through dozens of attack scenarios including hidden instructions, data exfiltration attempts, and multi stage adversarial prompts, and test a layered defense combining input filtering, separation of trusted and untrusted content, controlled processing, and output verification. The aim is to measure how much a multi layered defense reduces attack success while keeping the system usable, producing thesis research and open source tools.	Faculty & Graduate Research (2.2)	GCloud	\$7,000.00	Imad Antonios	Computer Science
2.215	Automated Airfoil Inspection	Central Connecticut State University	Central Connecticut State University researchers are automating the inspection of airfoils, flight critical parts in aircraft engines, which today relies on large teams of skilled workers and is slow, error prone, and a bottleneck in robotic manufacturing. Their system pairs robotics with computer vision: 2D convolutional neural networks detect surface defects including nicks, pits, scratches, and corrosion from high resolution images, 3D point cloud models inspect geometry at micron precision, and a fusion model combines the two, while imitation learning captures how expert inspectors prioritize and judge parts. The goal is fast, adaptive, comprehensive automated inspection, with outcomes including publications and a potential patent.	Faculty & Graduate Research (2.2)	Unity	\$10,000.00	Haoyu Wang	Manufacturing and Construction Management/Robotics and Mechatronics Engineering Technology
2.216	VIPER: Vulnerability Intelligence	Central Connecticut State University	Central Connecticut State University's VIPER project tackles the flood of cybersecurity threat data, thousands of newly disclosed vulnerabilities and threat intelligence records published every day across dozens of government and industry feeds that no human team can fully synthesize. The system uses large language models, including Gemini Pro via Vertex AI, in a structured prompt pipeline to continuously ingest and process a corpus of several hundred thousand records, extracting vulnerability classifications, threat actor patterns, affected sectors, and cross feed correlations. The result is an automated tool for spotting emerging threat trends and sector specific risks, delivered as publications, open source software, and thesis research.	Faculty & Graduate Research (2.2)	GCloud	\$10,000.00	Chad Williams	Computer Science Department / Software Engineering MS, Cybersecurity MS
2.217	Multimodal AI Wildfire Detection	University of Bridgeport	University of Bridgeport researchers are developing a drone based system for detecting wildfires early, addressing the delays, low resolution, and limited coverage of satellite and ground monitoring. Drones gather multiple data types including regular and thermal infrared imagery, gas readings (CO, CO ₂), and weather variables, which a deep learning model fuses using CNN based detectors such as YOLO for smoke and fire plus a Transformer based fusion module, splitting the work between on drone edge computing and cloud scale training. The goal is real time, high accuracy wildfire detection to better protect ecosystems, infrastructure, and public safety.	Faculty & Graduate Research (2.2)	Unity	\$8,000.00	Xingguo Xiong	Electrical and Computer Engineering/School of Engineering
2.218	Subjectivity-Aware Multi-Document Summarization	University of Connecticut	University of Connecticut researchers are studying how to automatically combine multiple peer review reports for a paper into a single coherent meta review, a task area chairs do by hand, reconciling objective judgments such as methodological soundness with subjective ones such as perceived novelty. The project uses long context Transformer language models trained with a technique called discrete preference optimization to better match how humans write these summaries, plus smaller models that tag each sentence as fact or opinion to guide the generator. The work aims to produce more faithful, subjectivity aware meta reviews, released with open source tools and a public dataset.	Faculty & Graduate Research (2.2)	GCloud	\$2,000.00	Suining (Henry) He	School of Computing
2.220	AI Agents for Rare Earth Element Discovery	University of Connecticut	University of Connecticut researchers are using AI to speed up the discovery of new materials for separating rare earth elements, metals essential to motors and electronics whose chemically near identical ions are notoriously hard and costly to separate, leaving the U.S. heavily reliant on imports. Their MASTER framework coordinates teams of large language model agents that work in cycles: some propose candidate binding molecules (ligands) and set up quantum chemistry simulations, another reviews the results and spots selectivity trends across different rare earth ions, and another ranks the best candidates for the next round. The goal is to identify promising ligand chemistries for next generation membrane based separation, feeding publications and a larger research effort.	Faculty & Graduate Research (2.2)	Unity	\$7,000.00	Baikun Li	Civil and Environmental Engineering

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2.221	LLM-Based Network Intrusion Detection	University of Hartford	University of Hartford researchers are rethinking network intrusion detection by treating raw network traffic as if it were natural language, so a traffic flow reads like a document, each packet like a sentence, and the payload bytes like words, rather than relying on hand crafted features that struggle to catch new attacks. They fine tune language models such as BERT on byte level traffic from standard cybersecurity datasets (CICIDS 2017 and UNSW NB15) to classify benign versus malicious activity, and also test whether prompting large language models can classify traffic without task specific training. The aim is intrusion detection that generalizes better to evolving threats, delivered through publications, open source tools, and thesis work.	Faculty & Graduate Research (2.2)	GCloud	\$9,000.00	Abu Saleh Md Tayeen	Computing Sciences
2.222	Developing an Ecological Impact Fund	Quinnipiac University	Quinnipiac University, working with Yale, is prototyping an AI enabled Ecological Impact Fund, a concept that rewards green technologies based on their verified environmental and public health benefits. The hard part is credible, scalable measurement, reporting, and verification of those benefits, so the project builds a platform that uses large language models to pull structured data out of varied documents (reports, invoices, deployment records), machine learning to spot patterns and anomalies, and simulation to test alternative baseline assumptions under uncertainty. The deliverable is a prototype verification platform and simulation toolkit, along with publications and a future grant proposal.	Faculty & Graduate Research (2.2)	GCloud	\$11,000.00	Tan Gurpinar	Business Analytics & Information Systems
2.225	VCell Models AI Explorer	University of Connecticut	University of Connecticut researchers are building the VCell Models AI Explorer, a tool that makes the large repositories of mathematical models used in systems biology easier to find, understand, and compare, models that are currently hard to reuse. The platform offers a natural language chatbot powered by large language models with tool calling that lets users search biomodel databases, retrieve model files in standard formats, visualize model components, and get AI assisted explanations of their biology and math. The goal is a full stack, open source platform that lowers the barrier to exploring and reusing existing biological models.	Faculty & Graduate Research (2.2)	GCloud	\$300.00	Michael Blinov	Center for Cell Analysis and Modeling, UConn School of Medicine
2.31	Introduction to Leadership	University of Bridgeport	University of Bridgeport is adding an AI-literacy module to the introductory course of its Sixth-Year program in Educational Leadership, which prepares aspiring school principals and supervisors for state certification. The module treats AI literacy as a leadership skill: future school leaders learn what AI and large language models are, how to evaluate AI-generated content for accuracy and bias, and how to guide ethical, equitable AI use across a school or district. The goal is for these leaders to build their own fluency early in the program so they can support responsible AI adoption among educators and students.	General Education Integration (2.3)	GCloud	\$650	Kerry K. Jones, Ed.D.	Educational Leadership
2.34	Innovative Leadership	Central Connecticut State University	Central Connecticut State University is bringing AI into TM 572 (Innovative Leadership), a course on how leaders drive creativity and lead technology oriented teams that has not previously covered AI. The instructor will add two modules, one on AI literacy, using large language models and critically evaluating their output, and another on the real world barriers and solutions to adopting AI in industry, reinforced through case studies, discussions, and assignments. The goal is to strengthen future managers' ability to lead effective AI adoption and turn AI insights into sound business decisions.	General Education Integration (2.3)	GCloud	\$650	Dr. Christine Benz	Manufacturing and Construction Management
2.35	Media: Freedom & Power	Southern Connecticut State University	Southern Connecticut State University wants to use AI to help students in JRN 101 (Media: Freedom and Power), a required journalism course and general education option also taught to high schoolers through an Early College program, work through dense Supreme Court decisions that are central to understanding the First Amendment. The plan is to give students an AI tool that helps them navigate a court opinion, ideally annotating and explaining key passages in the margins, so 100 level students with no legal background can follow the reasoning. The goal is to make primary legal texts more accessible and strengthen students' research and understanding of free expression cases.	General Education Integration (2.3)	GCloud	\$800	Jodie Gil	Journalism
2.36	Is AI Taking Over?	Quinnipiac University	Quinnipiac University's MSS 240 (Is AI Taking Over? Disruption, Disinformation, and the Future of Communication) examines how technologies like AI, facial recognition, and augmented reality are reshaping media, politics, and business. In a hands on module, students first analyze what makes AI generated writing feel persuasive compared to human writing, then work in groups using Google Vertex AI's Agent Builder to design their own chatbot, complete with a persona and ethical guardrails they then test the bot against (for example, does it acknowledge its limitations and avoid manipulative engagement?). The goal is for students to understand how these systems work and to critically evaluate their societal and ethical implications.	General Education Integration (2.3)	GCloud	\$700	David Kocik	Department of Media Studies in the School of Communications

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2.37	Logistics Management	Central Connecticut State University	Central Connecticut State University is weaving AI into its Logistics Management course, a core requirement for the Manufacturing Management degree that connects to professional logistics certifications. Each week, students first write their own answer to a discussion prompt, then have a generative AI tool produce its own cited response and compare the two, examining how the human and AI answers differ, whether the AI's references are actually valid, and how rephrasing the prompt changes the result. The goal is to build students' ability to use AI responsibly and critically, checking its output rather than taking it at face value.	General Education Integration (2.3)	GCloud	\$2,250	Susan Archer	Manufacturing and Construction Management
2.38	Seminar in Management: AI in Management	Eastern Connecticut State University	Eastern Connecticut State University's AI in Management seminar is a hands on course for senior business students exploring how AI is reshaping strategy, decision making, human resources, marketing, and operations. Rather than studying AI in the abstract, students begin with a module on how large language models work and how to use them responsibly, experimenting with prompts, comparing outputs, and writing reflection memos on where AI succeeds, where it fails, and what a manager must verify, then apply AI tools to open ended, real world management problems in team projects. The goal is for students to treat AI as a practical decision making tool while thinking critically about its accuracy, bias, and ethical risks.	General Education Integration (2.3)	GCloud	\$3,000	Wayne F. Buck	Business Administration
2.39	ECommerce	University of Hartford	The University of Hartford is redesigning its E Commerce course to show students how AI is reshaping online business, improving productivity, coordination, and decision making, while also teaching them where human judgment remains essential. Through a series of scaffolded modules tied to the course's supply chain focus, students use AI tools for tasks like inventory management, demand forecasting, fulfillment, and process improvement, then interpret the results themselves and evaluate the technology's limitations. The goal is for students to apply AI effectively in e commerce operations while developing a clear eyed understanding of its capabilities, limits, and ethical dimensions.	General Education Integration (2.3)	GCloud	\$1,500	Vicky Luo	Business Insights
2.41	Applications of Machine Learning	Sacred Heart University	Sacred Heart University is launching AI 201 (Applications of Machine Learning), a hands on course that introduces students from non computer science majors to machine learning fundamentals using low code, beginner friendly tools, no prior programming required. Working in Python notebooks (with libraries like pandas and scikit learn) alongside a Vertex AI language model, students prepare and explore real datasets from their own fields, run and interpret classical models such as regression, decision trees, and support vector machines, and use the LLM to help explain outputs, debug code, and reflect on each model's strengths and limits. The course builds from using models to understanding and modifying them, culminating in a final project where each student adapts a workflow to a new dataset in their discipline.	AI Course Delivery (2.4)	GCloud	\$1,000	Brent French	Minor in Applied AI