Elizabeth Huang

LinkedIn: elhuang04 | GitHub: github.com/elhuang04 | Phone: (440) 903-8594 | E-mail: elhuang04@gmail.com | U.S. Citizen

EDUCATION

Wellesley College *Candidate for B.A. in Computer Science* (GPA: 3.7) Sep 2022 – Oct 2025

- Artificial Intelligence, Theory of Computation, Fundamentals of Algorithms, Data Structures, Combinatorics & Graph Theory (Discrete Math), Linear Algebra, Special Relativity & Quantum Physics, Fundamentals of Mechanics, Applications of Electricity & Magnetism
- **MIT (GEL Certificate Program):** Design Thinking and Innovation Leadership for Engineers, Engineering Leadership Lab

Dartmouth College *Exchange Student* (GPA: 3.9) Jan 2025 – Jun 2025

- Computer Animation, AR/VR, Digital Tangible User Interfaces, Software Design & Implementation, Operating Systems, Computer Vision
- **Certificate & Awards:** *Citation for excellence in Computer Vision*, *TuckLAB: Entrepreneurship Certificate (Tuck School of Business)*

EXPERIENCE

AI/ML Software Engineer Intern, *NASA: OpenAIR (Open-source Agentic Information Retrieval) Initiative* Jun 2025 – Aug 2025

- Extended LLMs (AWS Bedrock, OpenAI Deep Research, Anthropic Claude, MS Autogen, Google Gemini) with LiteLLM (model-agnostic) framework for single-agent and multi-agent orchestration architectures specialized for deep research tasks (DRAs).
- Standardized internal tool usage through MCP servers to enable SOTA context-aware systems (vision capabilities, browser-use).
- Optimized performance on GAIA, WebVoyager, DeepResearch Bench, DeepResearchGym, BrowseComp, WebArena, etc. by developing ablation pipelines to evaluate impact of system changes on scalability, cost, latency, token usage, and model accuracy/precision/recall; constructed custom benchmarks using LightEval and HuggingFace YourBench for zero-shot, single-shot, and multi-hop tasks.
- Built codebase standards (docs, structure, unit/integration/performance tests) and authored ~65% of core system code (15,000+ lines).

Software Engineer and Product Manager Intern, *NASA: AETC Portfolio Office, Data & Analytics Team* Jun 2024 – Aug 2024

- Led customer discovery as an initiative lead, engaging 70+ stakeholders to define business and technical requirements, and drafted proposals for a real-time schedule optimization tool projected to reduce internal costs by $5M+ annually.
- Automated multidimensional risk scoring process for maintenance tasks using Python, R, Docker, and Google Cloud Functions by pulling from Quest, writing to SQL tables, and creating a full-stack web application to display UI (Bootstrap components) with Plotly Dash.
- Extracted 10+ custom entities with CFD metadata detection for Tecplot files using Document AI, Vertex AI for CRM-HL uploads.
- Reduced execution runtime by 40% with parallel processing libraries (multiprocessing, multiprocess, Pool, parallel, tictoc, asyncio).

delta v Startup Accelerator Fellow, *Martin Trust Center, MIT Sloan School of Management* Jun 2023 – Oct 2023

- Formulated persona profiles based on primary market research to optimize customer acquisition and accelerate length of sales cycle.
- Synthesized market research to pinpoint key stakeholders, quantify value propositions, and create high-level product specifications.

Product Development Intern, *SageX Inc* Jun 2023 – Aug 2023

Mobile-first coaching AI (artificial intelligence) SaaS EdTech start-up offering workplace performance support.

- Programmed a GUI to automate plain-text scripts into SSML, optimizing audio generation with MS Azure AI TTS from 1 week to 1 day.

PROJECTS

Knockin, s5 @ buildspace (Incubator backed by YC, a16z), Co-Founder and CEO Mar 2024 – May 2025

- Harvard WiE x Girls Into VC 2024 Summit Pitch Competition (3rd Place), Hult Prize National Competition (Qualifiers Round Winner)
- Developed core features: vision-enabled web scraping automations, database connection, ETL pipeline, and external API integrations.
- Conducted weekly demos with 35+ user tests with Google Workspace add-on MVPs written in Google Apps Script (based off JavaScript).
- Advised by Professors Catherine Delcourt, Eni Mustafaraj for topics in entity extraction, semantic search, semantic web, NLP, data mining.

World Finalist @ Microsoft Imagine Cup Innovation Accelerator, Founder and Principal Developer Sep 2022 – Jan 2023

- Executed fundamental app development in ASP.NET Core MVC framework to maximize cross-platform use and database connection.
- Architected end-to-end application with core Azure technologies (OpenAI, VM, Cognitive Services, STT) and Agile methodology.

Geographic Trends in Industry Segmentation: LLaMA/BERT Sentence Completion Probe Task May 2024

- Designed spatial bias probe tasks for the 2019 INC 5000 dataset using LLaMA and BERT on 9,222 sentence-completion tasks.

Super-Resolution CNN for Image Enhancement April 2025

- Developed a CNN-based super-resolution model with 16 residual blocks and global skip connections, trained on DIV2K dataset.
- Evaluated model performance using L1 loss, PSNR, and SSIM across denoising, deconvolution, and upscaling tasks.

ACTIVITIES

Organized: HarvardXR 2024 (Panel Moderation, Graphics), Hacking Injustice 2025 (Co-Director), WHACK 2023 (Co-Director)
MITxHarvard Women in AI, Sponsorship Liaison, *Feb 25–May 25*
Google Developer Student Clubs, President, *Sep 23–May 24*
2x Technigala Presenter (invited to HanUnder), *Mar 25*
National Science Foundation, I-Corps Spark 2307, *Jul 23*

SKILLS

Python (TensorFlow, Keras, PyTorch, NumPy, Pandas, Scikit-learn, NLP, OpenCV, Flask) | C# (ASP.NET Core, MVC, Unity, Oculus/Meta XR) | Java, C++, C, Bash/Shell | SQL (MySQL, SQLite, Oracle, PostgreSQL) | HTML/CSS, JavaScript (React.js, React Native), Flutter/Dart | Docker, Kubernetes, Linux/Unix, Google Cloud (Gemini APIs, BigQuery, Vertex AI) | R/RStudio, Power BI, Tableau | Git/GitHub/GitLab | AI/ML (LLMs, RAG, ReAct, Agents, CV, RL) | Arduino, Processing | Adobe CC, Figma, Maya | Salesforce, IT Support (DNS, MFA)