Hudson Mitchell-Pullman

hudsonmitchellpullman@gmail.com | +1 (858) 868 0309 | hudson-mitchell-pullman
hudsonmp | hudsonmp.vercel.app

Research Interests

The Effect of Manipulating Input-Output Pairs in AI-Assisted Programming Systems for Pedagogy
Trends in AI interactions across novice computer science students
How are educators adapting learning objectives among computer science students due to AI-assisted programming?
Should educators teach computer science at higher levels of abstraction and emphasize 'conversational programming'?

Education

2024 - present **Henry High School**, Expected Graduation 2028 GPA: 4.66/4.0
Relevant Coursework: Math, Computer Science

2025 - present **UC San Diego** (Dual Enrollment)
Linear Algebra, Discrete Mathematics

2025 - present **Art of Problem Solving**
Calculus, Olympiad Mathematics

Research Experience & Projects

Mentored Research — UCSD CS Education Lab June 2025 - present

- Researching prompt engineering education through the use of pedagogical interactive AI systems.
- Performed an informal literature review on prompt engineering, human-computer interaction, and AI-assisted novice programming education.
- Drafted a research proposal analyzing the effect of manipulating input-output pairs in AI-assisted programming systems for pedagogy.

Independent Research Projects - Submitting to ISEF + CHI Ongoing

- Designed observational studies to evaluate the effect of input-output pair manipulation on high school computer science education.
- Using a real-time AI tutor with handwriting recognition to provide pedagogical feedback and improve problem-solving for math students.
- Currently preparing research from an observational study to present at ISEF qualifying science fair(International Science and Engineering Fair)

Technical Skills

Programming, Math, Research: JavaScript, React, HTML, CSS, Python, Google Colab, PyTorch, data analysis and visualization, FastAPI, MCP servers, statistics, calculus, algebra, olympiad mathematics (AMC 12), computational thinking, deep research, prompt engineering, experimental design

Tools & Platforms: Web development frameworks, version control (Git/GitHub), Figma, Cursor, Claude Code, ArXiV, Google Scholar, Overleaf

Leadership & Activities

Founder & President, Henry AI Club April 2025 - present

- Built community of 15 students interested in AI and computer science; organized five in-person workshops
- Mentored 10 high school students in prompt engineering, computer science, and human-AI interaction
- Coordinated a group of three other students for the Presidential AI Challenge
- Led a group of two peers at a local hackathon; earned the design award
- Presented to the World Language department on applications of AI in language acquisition

Member, SDx @UCSD January 2025 - present

- Youngest member of UCSD's invite-only AI startup and builders community
- Built 3+ projects and collaborated with UCSD students on hackathon projects
- Attended talks from YC alumni and networked with current YC batch founders

Web Development Intern, UC San Diego CS ForEach November 2024 - February 2025

- Gained hands-on experience with React, JavaScript, HTML, and CSS through a structured program

Speaking & Hackathons

Khan Academy AI in Education Summit November 1, 2025

- Presented at an exclusive educational conference on integrating Generative AI into Intelligent Tutoring Systems. Included a small group of Stanford students, the head of education at Anthropic, the director of the Stanford Accelerator for Learning, and other industry professionals, teachers, and students.

Hackathons

SDx Anthropic + Parallel AI Hackday

- arXai: built an agentic tool that performs a deep review and autonomous annotations of prominent papers in a research domain to accelerate literature reviews in academia for STEM researchers.

Multimodal Agentic Gemini Hackathon - Cerebral Valley October 2025

- Finalist (Only six out of 60 teams and 400 participants)
- Syntra: Built an enterprise agentic design platform that directly integrates with Figma for web designers.

CipherHacks October 2025

- Design Award (75 participants)
- TuringVault: Analyzes vibecoded GitHub repositories, identifies security vulnerabilities, and provides targeted recommendations.

TritonHacks May 2025

- Finalist
- FirstIntel: Fine-tuned YOLOv6 model to track the number of inhabitants in a building and proactively alert first responders.

SDx Replit Hackaton March 2025

- Netwrxk: Connect undergraduate and graduate students with labs at UCSD that fit their interests.