

Thomas Morford

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Profile

I am a Computer Science & Engineering student at the University of California, Merced (Class of 2028). My passion lies in utilizing software and hardware to raise the ceiling of possibility, especially for people who face difficulties with modern computing interfaces. I am experienced in programming, research, project management, and system administration. Previously, I have programmed an LLM-based control interface for agricultural robotics, architected and maintained the digital infrastructure for a non-profit, and published two peer-reviewed papers in astronomy journals, to name a few.

Education

University of California, Merced

2024 – 2028

B.S., Computer Science & Engineering (expected 2028)

Stanford Online High School

Aug 2019 – Jun 2024

High School Diploma

Work Experience

- **Agricultural Robot Natural Language Control Agent**

Research & Development

UC Merced

Present

- Developing an on-device natural language control agent for agricultural robotics using small language models.

- **Autonomous Computer Use Agent for Tetraplegics**

Project Manager & Lead

UC Merced

Present

- Leading a team of students to develop a maximally autonomous computer-use agent for individuals with tetraplegia.
- Managing project timeline, coordinating team efforts, and overseeing technical development.

- **U.S. NSF Internet of Things for Precision Agriculture**

Undergraduate Research Assistant

UC Merced

Jun 2025 – Aug 2025

- Contributed to research activities for an NSF-funded IoT for Precision Agriculture project.
- Designed and implemented a web application to connect to and control agricultural robots.
- Red-teamed and hardened a Large Language Model-based mission planning system, including creating a framework for automated pentesting using LLMs.
- Orchestrated Docker containers for modularization and portability.

- **Words for the World**

Founding Engineer

Remote

Jun 2023 – Jun 2024

- Founding engineer role during early-stage product development.
- Managed serverless hosting via Cloudflare, domain name registration, and email marketing.
- Implemented the project's website.

- **Stanford Online High School**
Remote

Student Research Team Lead
Jan 2023 – Jun 2023

- Led a team of students conducting independent astronomy research as part of a seminar.
- Published two peer-reviewed academic papers; first author on one.
- Presented research findings at the Society for Astronomical Sciences.

Extracurricular & Research

- **Student Research Team Lead, Stanford Online HS** **Jan 2023 – Jun 2023**
Led student research, coordinated experiments/observations, mentored contributors, and prepared manuscripts and presentations for conferences.
- **Conference Presentation** — Presented work at the Society for Astronomical Sciences.
- **Research Publications** — See Publications section.

Publications

- **V765 Cassiopeiae: A Fortuitous Eclipsing Binary in the Owl Cluster.** [\[Link\]](#)
- **Astrometric Measurements of the Double Star Systems AG 85, STF 414, and STI 2036.**
[\[Link\]](#)

Technical Skills

Programming & Tools:

Large Language Models (LLMs)
Robot Operating System (ROS)
JavaScript, Python, C, Shell
TypeScript, Web Platform, React, HTML/CSS
Linux, Unix, Make, system administration
Docker

Other:

Research & academic writing
Conference presentations
Team leadership
Project management