

SOFTWARE ENGINEER | TECHNICAL EDUCATOR

Taught English and Computer Science for twenty years; now a Learning Curriculum Designer at the University of Arizona while finishing a B.S. in Computer Science (4.0 GPA, Dec. 2026) and building full-stack AI applications.

TECHNICAL SKILLS

Languages: Python, Java, TypeScript, JavaScript, C, HTML/CSS

Frameworks & Infra: React, FastAPI, Node.js/Express, PostgreSQL, Supabase, Vercel, Netlify, Render

AI & Tools: OpenAI API, Vercel AI SDK, Codex, GitHub Actions, Git, Docker

SELECTED PROJECTS

Mercury Game | React, TypeScript, FastAPI, Supabase, OpenAI API – Negotiation simulation where a human plays alongside eight AI representatives for countries and NGOs.

- Built persistent game state and deterministic backend workflows to make LLM behavior structured and testable.
- Refactored agent architecture from a 60–90 second delay spinning up eight AI RAG agents to a hidden ~10 second single-agent instantiation, eliminating gameplay interruption.
- Backed by 67 passing tests across authentication, persistence, state transitions, ownership, and review flows, including targeted authorization tests blocking cross-user access.
- Deployed publicly via Netlify/Render with Supabase auth and cloud-hosted Postgres.

AI Data Explorer | React, TypeScript, Vite, Vercel AI SDK, OpenAI API, Strava API – Cycling-data app pairing visual exploration with an AI collaborator grounded in shared, typed state.

- Built a shared, typed AnalysisState so filters, visualizations, and the AI assistant operate on identical application state: the AI receives a snapshot only when the user submits a question.
- Implemented deterministic analysis tools (summaries, comparisons, trend detection) so the LLM interprets results rather than calculating from raw data; AI-suggested view changes require explicit user approval.
- Integrated Strava OAuth for live data; deployed to Vercel with CI-enforced type checks, linting, automated tests.

SemiSphere, University of Arizona – Semiconductor education repository designated NNME's future national hub.

- Reviewed and re-selected the development vendor after the original vendor's contract stalled pre-signature; worked directly with the new vendor through initial setup and roadmapping.
 - Helped source, prepare, and ingest initial 200+ educational resources from ~10 contributors.
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PROFESSIONAL EXPERIENCE

Learning Curriculum Designer | University of Arizona — Tucson, AZ 2023–Present

- Designed and led 15+ on-campus AI and assessment workshops, minicourses, and institute sessions reaching 300+ faculty, staff, and students, including modules on AI-assisted workflows, prompt engineering, and APIs.
- Presented at 3 national conferences (AAC&U, ASEE, UPCEA) on AI, assessment, and engineering education.
- Co-developed a university course preparing future computer science educators.

Computer Science & English Teacher | University High School — Tucson, AZ 2002–2023

- Rebuilt CS program (Java, JavaScript) with 140+ students annually; served 7 years as English Department Chair.
- Led project-based CS curriculum and technical extracurriculars (Girls Who Code, CyberPatriot, Robotics).

Software Development Intern | Raytheon Missile Systems — Tucson, AZ Summers 2018-19

- Built UI components and documentation using AngularJS, HTML, and CSS and participated in UX evaluation and iterative improvement of internal software tools.
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EDUCATION

University of Arizona — Tucson, AZ | *Bachelor of Science in Computer Science*, Expected December 2026 • GPA 4.0

Chapman University — Orange, CA (Tucson Campus) | *Master of Education*, 2003; AZ Secondary Teaching Certificate

Virginia Tech — Blacksburg, VA | *Bachelor of Arts in English*, 1998