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EXPERIENCE

Software Engineer at SyberLabs, Walnut Creek, CA

2026 – Present

- Built Dynamic Kernel: vectorized NumPy/SciPy transitions on directed weighted graphs; FastAPI + Pydantic + Uvicorn REST; live WebSocket occupancy/traffic streams into a React 19 / TypeScript / Vite visualizer.
- Implemented telemetry-conditioned softmax routing, edge-leverage sensitivity, and pytest coverage of kernel, simulator, edge-learning, and API surface.
- Built OSAHR, a dependency-free Python 3.11+ typed hypergraph rewrite kernel with Gillespie/next-reaction scheduling, deterministic hashes, and Monte Carlo ensembles with bootstrap confidence intervals.
- Shipped RISE with GitHub Actions CI: Vitest, production build budgets, npm security audit, and a 4-way sharded Playwright browser matrix on every pull request.
- Built OmniOS as a typed canvas architecture (Next.js, React, Zustand, dnd-kit) with port/wire validation so incompatible blocks cannot be connected.

Applied Machine Learning Project at Santa Clara University, Santa Clara, CA

2026

- Built SkyPredict V2 in CSEN 140 as a LightGBM pipeline over 6.96 million U.S. flight records with a three-stage feature stack: flight metadata, backward-joined hourly weather, and 3-hour rolling airport network-pressure.
- Enforced pre-departure-only observability in code with whitelist/blacklist column filters and runtime leakage-guard assertions; trained and evaluated on chronological splits rather than random shuffles.
- Held out approximately 1.16 million Nov–Dec 2024 flights: 0.713 ROC-AUC, 0.349 PR-AUC, 19.23-minute delay MAE; reported staged ablations and limits in a Streamlit dashboard, with network-pressure as the largest incremental lift.

EDUCATION

Santa Clara University — BS Computer Science, Emphasis in Data Science

June 2026

Coursework: Machine Learning, Artificial Intelligence, Algorithms, Data Structures, Programming Languages, Automata and Theory of Computation

Western Governors University (WGU) — MS Computer Science

September 2026 – Present

Specialization: Human-Computer Interaction

TECHNICAL PROFICIENCIES

Languages: Python, C, C++, C#, Go, Scala, TypeScript, JavaScript, SQL, HTML, CSS

Systems / APIs: FastAPI, Pydantic, Uvicorn, REST APIs, WebSockets, Kafka, Kubernetes

Compute: NumPy, SciPy, vectorized simulation, Gillespie / Monte Carlo, typed hypergraphs

Data: pandas, SQL, SQLite, PyArrow, time-series joins, leakage assertions

Frontend: React, Next.js, TypeScript, Vite, Zustand, Tailwind CSS

Testing / CI: Git, GitHub Actions, pytest, Vitest, Playwright, ESLint, Netlify

ML: PyTorch, Hugging Face Transformers, LightGBM, XGBoost, scikit-learn, RAG