Jack White

Relocating to Bay Area / LA • US Citizen • (415) 847-0063 • white942@purdue.edu • LinkedIn • GitHub

Education

Purdue University West Lafayette, IN
B.S., Double Major in Computer Science and Artificial Intelligence 2023–2027
GPA: 3.53/4.0 • **Dean's List (6 times)**
Coursework: Algorithms, Machine Learning, Robotics; current: Operating Systems, Imitation Learning

Experience & Research

BPM Microsystems – maker of automated chip programming systems Houston, TX
Automation / AI Software Engineering Intern Jul–Aug 2025; May–Aug 2026

- Built **AlgoBuilder**, an agentic LLM system that generates and validates NAND/NOR flash programming algorithms; saved an estimated **10–15 engineering hours per algorithm** with **over 80% fully automated completion** across more than 40 validated algorithms.
- Modernized **Chip**, an internal AI assistant used by **about 75% of employees**; connected it to Salesforce and Google Drive through Model Context Protocol (MCP), added tests, and reduced model call costs.
- Built **PDR Builder**, an AI-assisted pipeline that turns datasheets and product specs into engineering artifacts, with deterministic validation and human review; passed **27/27 historical design validations**.
- Extended the **BPWin REST API** (v1.2 to 1.9) with job monitoring, device discovery, and validation endpoints so programming jobs can run unattended.

Purdue University – Prof. Yexiang Xue West Lafayette, IN
Robot Learning Research – Zero-Shot & Active Learning Present

- Developing LLM and diffusion policy methods to generate demonstrations without human input, bridging hub-to-hub and hub-to-goal transitions in latent space for zero-shot robot learning.

Purdue University – Prof. Yung-Hsiang Lu West Lafayette, IN
Computer Vision Research Aug–Dec 2025

- Implemented computer vision methods that transcribe piano performance video to MIDI, used to evaluate generative music performance systems.

Selected Projects

ControVirtual – Robot Learning and Teleoperation Apr 2026

- Fine-tuned **SmolVLA**, a vision-language-action (VLA) model, on 50 teleoperated episodes, raising task success from **0% to about 75%**; built XR teleoperation with Meta Quest/Unity and a digital twin. **Honorable Mention, Best Use of AMD Tech**, StarkHacks 2026.

SlopMop – AI Content Detection Browser Extension 2026

- Built the integrations for five social platforms (LinkedIn, Facebook, Instagram, X, Reddit) in a browser extension that flags likely AI-generated posts; cut detection time to **about 0.6 seconds**.

FilingEdge – Financial Machine Learning Research System 2026

- Built an ML system that predicts abnormal stock returns after SEC filings using only data available at filing time, validated with purged walk-forward cross-validation and backtested net of transaction costs.

TradingSim + RCBot – Market Simulation and Automated Trading 2026

- Built an event-driven market simulator that replays Level 2 order book data with latency- and depth-aware fills, plus a strategy engine that runs the same code in backtests and Interactive Brokers paper trading.

Technical Skills

Languages: Python, C++, C, Java, TypeScript/JavaScript, SQL
AI / ML: PyTorch, Hugging Face, LeRobot, LightGBM, pandas, NumPy, OpenCV
Systems / Web: FastAPI, React, PostgreSQL, Redis, DuckDB, Docker, AWS
Tools: Linux, Git, Mercurial, Unity

Additional Experience

Keyboardist in three bands (Down to Funk, 3rd Street Collective, Silver Wizard); opened for **Magdalena Bay** at Purdue's Elliott Hall of Music for about **6,000 attendees** (Mar 2026).