William Hao

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EDUCATION

The University of Texas at Austin May 2027
B.S. Computer Science & B.S. Mathematics – GPA: 3.9/4.0
Relevant Coursework: Computer Architecture, Data Structures, Discrete Math, Stochastic Processes, Linear Algebra, Probability

EXPERIENCE

Citi, Dallas, TX June 2026 – August 2026
Incoming Software Engineering Intern

- Selected for Citi's Technology Summer Analyst (Application Development) program; team placement pending.

PROJECTS

Automated Hockey Trading Engine
Technologies: Rust (Tokio, axum), WebSockets, Python (SciPy), JavaScript, AWS EC2

- Architected Rust trading system executing live orders on Kalshi hockey markets; traded 1M+ contracts in total volume.
- Modeled win probabilities via Poisson; calibrated against live orderbooks via grid search over 160k+ combinations.
- Structured multi-crate async codebase with precomputed trade plans for low-latency execution on market updates.

Prediction Market Trading Infrastructure • GitHub
Technologies: Python (FastAPI, asyncio), WebSockets, SQLite, JavaScript

- Built live trading interface streaming Kalshi market data and placing real orders with <250ms p99 end-to-end latency.
- Implemented RSA-PSS signing and real-time orderbook synchronization; placed 1k+ live orders with zero failures.
- Deployed Polymarket monitor bot tracking 20+ wallets with real-time Telegram alerts on high-conviction positions.

Marvis (HackMIT 2025) • GitHub
Technologies: Python, TypeScript, MentraOS SDK, Bun, Docker**,** AWS S3

- Shipped and demoed AR "handyman" assistant in <24h; won 1st Place (Mentra Glass Sponsor Track) among 300+ teams.
- Engineered stateful voice intent parser on MentraOS, enabling hands-free UI navigation with <100ms latency.
- Designed multi-model AI backend (Cerebras, Anthropic) to generate AR instructions from barcode scans in <300ms.
- Developed real-time ingestion pipeline to process live camera inputs and persist session data to AWS S3.

willhao.com • GitHub
Technologies: TypeScript, Next.js, React, REST APIs, HTML/CSS, Nginx, PM2

- Built full-stack TypeScript portfolio with Next.js/React frontend and custom backend for dynamic data widgets.
- Integrated Spotify OAuth 2.0 and Chess.com APIs with custom endpoints to display live listening history and game stats.
- Achieved 100/100 Google Lighthouse performance score; self-hosted on DigitalOcean behind Nginx with PM2 and SSL.

ACTIVITIES & HONORS

Texas Undergraduate Computational Finance | Quantitative Analyst • GitHub January 2025 – Present

- Built full-stack React/Flask trading dashboard for 50+ users, automating P&L calculations from raw trade emails.
- Engineered Python NLP pipeline to process 4,000+ NFL transcripts and model 450+ Kalshi football "mention" markets.

UT Austin Department of Mathematics | Undergraduate Researcher • Presentation January 2025 – April 2025

- Authored 18-page technical paper linking Benford's Law to statistical fraud detection; selected to present to 30+ faculty.

SKILLS

Programming Languages: Python, Java, C, C++, Rust, TypeScript, JavaScript, HTML/CSS, SQL, Verilog/SV
Technologies: React, Next.js, Node.js, Git, Flask, pandas, NumPy, SciPy, APIs, OAuth 2.0, WebSockets, PostgreSQL, SQLite, Supabase, Jupyter Notebook, PyTorch, LLMs, Docker, Nginx, PM2, Linux, AWS (EC2, S3), DigitalOcean
Awards: USA Computing Olympiad Gold (Java, 2021)
Interests: Competitive chess (USCF 1815; Chess.com 2200), Powerlifting, Running