Richard Yin

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Education

University of Maryland - College Park   August 2023 - May 2027
Bachelor of Science in Computer Science, Minor in Mathematics   *College Park, MD*
- **Coursework:** Algorithms, Data Structures, Data Science (Python, SQL), Operating Systems, Multivariable Calculus
- College Park Scholars: Science Technology and Society, App Development Club
- GPA: 3.51

Experience

Echostar   June 2025 - August 2025
Software Engineer Intern
- Designed and implemented an embedded Go (GoLang) network connectivity monitoring system, running on Delta aircraft through Docker, performing real-time network and service tests (latency, headless browser, etc)
- Replaced an inconsistent Python-based system that suffered from missed test runs by using ticker-based scheduling and timeout-bound goroutines, reducing CPU usage by 50%.
- Developed an archival pipeline that compresses JSON test results every 10 minutes into .tar files, stages them for post-flight upload to GCP, and purges local data daily to save storage.

Children's National Hospital   September 2024 - May 2025
Software Engineer Intern
- Collaborated through the University of Maryland's App Development Club to develop a medical device monitoring system for children with tracheostomy.
- Implemented the Bluetooth (BLE) data transmission system between an ESP32 on the medical device and a Raspberry Pi hub, improving speed and reliability by 10× by replacing polling with a notification listener.
- Developed a Flutter-based mobile app for real-time monitoring and alerting emergencies.

Relentless Returns   January 2025 - May 2025
Software Engineer Intern
- Was first intern at a SEC-registered investment management firm startup; implemented a KYC (Know Your Customer) onboarding form on React.js with TailwindCSS to ensure compliance with Alpaca's broker requirements.
- Met with the CEO and CTO in weekly standup meetings to discuss product features and development plans.
- Developed backend logic to compile client trade and balance data from Supabase and Alpaca, enabling automated PDF generation of monthly statements and real-time trade confirmations.

Tramona   September 2024 - December 2024
Software Engineer Intern
- Built and optimized full-stack platform (Next.js, tRPC, Prisma) for Airbnb vacancy tracking startup Tramona.

Projects

Testudo Match – Bitcamp 2025 Hackathon | *Google Gemini, LangChain, HuggingFace, Next.js*
- Built a web app that generates tailored class schedules from natural language queries using AI tools.
  https://devpost.com/software/testudo-match
- Implemented similarity search using HuggingFace Sentence Transformers and LangChain's MemoryVectorStore to match course descriptions with user interests.
- Leveraged Google Gemini API to extract intended course difficulty and level (e.g., 400-level) from user input.
- Designed backend logic to generate and rank the best student schedules.

Skills

Programming Languages: TypeScript, JavaScript, Python, Java, Go, SQL, HTML, CSS, C, Rust, Ocaml
Frameworks & Libraries: React, React Native, Node.js, Flutter, Next.js, TailwindCSS
Tools & Technologies: Git, Docker, LangChain, HuggingFace, Google Gemini, PostgreSQL, MongoDB
Other Skills: AI/ML, CI/CD, Data Science, Data Structures