Andrew Nuisud

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EDUCATION

Boston University
Expected May 2027
Bachelor of Arts in Mathematics and Computer Science
Boston, MA
Relevant Coursework: Linear Algebra, Discrete Structures, Computer Organization, Data Structures

EXPERIENCE

Founder & Software Engineer
Jan 2025 - Present
PixelTools LLC
Boston, MA
- Built **Python arbitrage engine** automating **100K+** in-game asset trades with **<200ms latency**, boosting by **61%**.
- Implemented **concurrent API calls** with asyncio/httpx, **cutting request errors by 37%** and raising uptime by **9%**.
- Averaged **~$300** monthly profit per user at **8.4%** margin via valuation algorithms and RAP-based pricing logic.
- Automated trade logging to **Firebase via REST**, enabling real-time analytics and Discord webhooks for **100+** users.
- Deployed **Python client on VPS** (Digital Ocean) with **Firebase auth**, enforcing 1-device license use for **112+** users.

Teaching Assistant – Engineering Programming
Jan 2025 – May 2025
University of California
Remote
- Evaluated **700+ Python and C++** lab submissions for **90** students with **100%** turnaround using **Gradescope**.
- Hosted **12-hour** weekly sessions, resolving **~240** debugging issues with **94%** positive feedback across courses.
- Raised lab scores **18%** by creating structured rubrics and mentoring **recursion, loops, and debugging** in Py/C++.

Software Development Intern
Aug 2023 – Jan 2024
Bay Valley Tech
Remote
- Deployed Flask service with **server-side rendering + caching**, cutting load times **42%** for **100+** daily users.
- Reviewed **31 PRs** in **4-dev** team, reducing turnaround **26h** to **15h** and **boosting success to 88%** with checks.
- Raised test coverage **24%** to **71%**, **~300 LOC**, cutting release defects by adding **41 unit integration checks**.

PROJECTS

Backend Banking System | *Java, Spring Boot, SQL (Basic Queries, H2)*
- Engineered a secure, scalable **RESTful API with DTO validation**, **Spring Data JPA**, and **JWT role-based access**, achieving **98.7%** transaction success.
- Optimized performance with **concurrent fund transfers**, **Redis caching**, and **H2 indexing**, reducing **latency to 84 ms** and sustaining **5,000+ concurrent transactions** under load.

Self-Driving Line-Following Robot | *C++, Embedded Systems, IR Sensors*
- Built an autonomous robot to follow black-line tracks using IR sensors, PWM-tuned motor control, and direction memory, completing **2/2 trials** in under **15s avg**.
- Raised lost-line recovery from **61.2%** to **79.5%** and re-acquisition consistency by **30%** by adding boost recovery and stuck-turn detection, reducing course failures by **22.4%**.

Outfit Matcher AI | *Python, OpenAI API, Selenium, AWS*
- Developed an AI tool to match outfits by combining **GPT-4 Vision** with **perceptual hashing and Hamming distance**, achieving **96.4% attribute extraction** accuracy on 57 test cases.
- Scraped **1,482 Depop listings in 42 min** usintcg **Selenium with dynamic waits**, structuring **metadata into 12 clothing categories** for analysis.

ACHIEVEMENTS

Hewlett Packard Enterprise CodeWars Programming Competition
March 2023
3rd Place Winner - Annual Hackathon (**Top 1.5%** of **50+** groups)
- Placed **3rd** out of **50+** groups at HPE's annual hackathon by solving competitive programming challenges with graph traversal, sorting, and dynamic programming in Java.
- Implemented binary trees, hash tables, and adjacency lists to optimize algorithmic performance and support efficient problem-solving in a **3-member** team.

TECHNICAL SKILLS

Languages: Java, Python, C++, JavaScript, SQL, HTML/CSS
Frameworks & Tools: Spring Boot, Node.js, React.js, Next.js, Postgres, Docker, AWS, Firebase, GraphQL, Jenkins, Git
Methodologies & OS: Agile/Scrum, Jira, Linux, Microsoft Office Suite, Oracle, Microsoft SQL Server,
Python Libraries: Pandas, NumPy, TensorFlow, OpenCV, Matplotlib
Concepts: Software Engineering, Frontend, Backend, Distributed Systems, Low-Latency Processing, REST APIs