Michael Huang

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Summary

New grad backend engineer with production experience in API design, systems programming, and AI integration. Built a production-grade MCP server with async polling architecture and 157 unit tests as a contract engineer. Strong foundation in C, POSIX, and Linux systems from coursework and personal projects.

Education

California Polytechnic State University - San Luis Obispo San Luis Obispo, CA

Bachelor of Science in Computer Science, Minor in Philosophy; Graduated: August 2025

- **Relevant Coursework:** Data Structures & Algorithms, Computer Architecture, Operating Systems, Systems Programming, Database Systems, Deep Learning

Professional Experience

Dynamic Experts December 2025 – January 2026

Contract AI Engineer *Remote*

- Architected a production-grade MCP (Model Context Protocol) server to expose deep-research capabilities, integrating Gemini 2.5 Pro with markdown sanitization and automated citation handling
- Delivered a fully documented, production-ready codebase with **157 unit tests** (Vitest), ensuring seamless handoff to the client engineering team
- Optimized async polling architecture with **90-minute timeout handling** to support long-running inference tasks (**60+ minutes**), solving critical timeout issues in standard HTTP request flows

Solidigm (Formerly Intel NAND) June 2022 – August 2023

Automation and Product Engineering Intern *Folsom, CA*

- Migrated legacy Python 2.7 automation frameworks to Python 3.x, modernizing the codebase for **600+ production-line tests** and significantly reducing false-positive failures
- Engineered end-to-end automation scripts that increased test coverage, saving the engineering team approximately **8 hours of manual verification per SKU** during testing cycles
- Performed root cause analysis on non-product failures, implementing patch fixes that improved overall testing stability and reduced infrastructure downtime

Hackathon

Hackathon Wins | *Gemini, Azure Speech, ElevenLabs, TypeScript* Jan 2026

- Won **2nd place** at **two** hackathons, building a real-time election misinformation detector (Before the Ballot) and a live speech fact-checker (Claude Code Hack Day @ AWS, out of **25 teams**)
- Upgraded static LLM validation to **live search grounding** with Gemini, enabling real-time source retrieval and contradiction flagging
- Engineered a JSON Schema validation layer using Gemini to ensure deterministic, error-free outputs from non-deterministic LLMs
- Led orchestration of **four microservices** and shipped fully integrated, crash-resistant MVPs under tight sprint deadlines

Projects

Custom Linux Shell & System Programming | *C, POSIX*

- Implemented a custom Linux shell supporting pipes and process management to mirror core Unix behavior
- Built a text-based client–server messaging tool between two Linux machines using sockets
- Developed a tape archiver and Huffman encoder/decoder to explore low-level compression techniques

Huffman-Encoding/Decoding | *C, Linux*

- Implemented Huffman Encoding and Decoding in C to compress and decompress text files. Built frequency tables, constructed Huffman trees, and generated encoded binary output
- Included functionality to decode binary files back into original text format and compare file sizes before and after compression, achieving typical compression ratios of 40-60%

Technical Skills

Languages: Python, C/C++, Java, JavaScript (ES6+), TypeScript, SQL
Backend & APIs: Node.js, Express, RESTful APIs, MongoDB, Microservices, MCP
Systems: Linux, POSIX, System Programming, Sockets, Process Management
AI/ML: PyTorch, Gemini API, Azure Speech SDK, Sklearn
Tools: Git, Vitest, Firecrawl API, Confluence, Jira