

EDUCATION

Carnegie Mellon University
Bachelor of Science in Computer Science, Minor in Machine Learning

Pittsburgh, PA
Dec 2026

Coursework: Distributed Systems, Computer Systems, Data Structures & Algorithms, ML (PhD), AI, Robotics

Honors/Activities: SCS Dean’s List (Fall 2024), CMU AI Safety Initiative, CMU Racing (Autonomous Driving Team)

WORK EXPERIENCE

Software Development Intern (AI/ML) | Amazon Web Services
Incoming May 2025

Software Engineering Intern | Hadrian
May 2024 – Aug 2024

- Built software stack to enable robotic tool-loading – using Python/Go for task orchestration, C++ for hardware control
- Implemented a low-latency (<50ms) Kafka event streaming pipeline to sync the robotic cell with factory operations
- Created and deployed an ML model using Azure to validate tool positioning and type, achieving 98.5% accuracy
- Reduced tool-loading times by 75% in building parts for clients such as Raytheon, SpaceX, and the US Air Force

Founding Engineer | Compos Mentis
Aug 2023 – May 2024

- Developed AI-driven platform for case qualification and legal document analysis, generating \$90k revenue from 23 legal firms
- Built RAG system with Azure Functions and Airflow DAGs to process 50K+ pages, extract text via AWS Textract, embed documents in Milvus for vector search, and generate insights using fine-tuned LLMs on Azure — accelerating review by 8x

Software Development Intern | Machina Labs
Jul 2022 – Sep 2022

- Built full stack React and Python web application to visualize and edit part geometries, deployed on Azure with Kubernetes
- Created ML pipeline to improve part alignment using scanned data, applying Bayesian optimization & projection techniques
- Achieved 40% faster iteration and 25% reduced RMSE on parts for clients such as NASA, SpaceX, and the US Army

Software Engineering Intern | United Talent Agency
May 2022 – Jul 2022

- Developed automated Github and Azure workflows for a talent management suite, cutting deployment time, failures by 50%
- Implemented a Redis-based logging system to track 2k+ events daily, including API traffic, health checks, & VM provisioning

PROJECTS

Train of Thought [🔗](#) | Typescript, Google Cloud, Next.js, Vercel AI

- Built a multi-agent LLM system capable of chain-of-thought reasoning & recursive subproblem validation w/ Google Gemini
- Integrated features such as agent backtracking, prompt decomposition, safety and correctness validation, and output critique
- Deployed chat interface and tested on 20+ programming puzzles, achieving ~80% increase in passed tests vs. standard model

TexPilot [🔗](#) | Typescript, Python, Perl, LlamaIndex, AWS Lambda, S3

- Built a Github Copilot-style browser extension for LaTeX code generation, autocompletion, and explanations with LLaMA 2
- Created real-time (<450ms) Python backend for context-aware completions using indexed LaTeX code/docs via LlamaIndex

File-Caching Proxy [🔗](#) | C, Java, RMI, JMeter, Valgrind, GDB

- Built a low-latency distributed system for remote file operations, including a server, caching proxy, and interposition library
- Reduced file access latency by 70% in simulated loads using a LRU chunk caching mechanism, achieving a 90% cache hit rate
- Designed server-proxy protocol using Java RMI to safely handle 300+ concurrent clients with consistent open-close semantics

FireFinder [🔗](#) | AWS, C++, Node.js, React Native

- Developed real-time pipeline for fire detection and location-based evacuation routing within 3 seconds of a fire outbreak
- Integrated AWS IoT, S3, and Lambda to trigger alerts and stream sensor data from a prototype Arduino-based fire detector

ACHIEVEMENTS

VEX Robotics World Championship (2x) | Achieved top ~30 out of 11k teams as Team Captain (2019-23)

AWS Certified Solutions Architect | Lockheed Martin Scholar (\$40k) | Edison International STEM Scholar (\$50k)

TECHNICAL SKILLS

Languages: C, C++, Python, Javascript, Typescript, Java, Go, SQL, Bash, HTML/CSS

Services: AWS, Azure, GCP, Databricks, Kubernetes, Airflow, Spark, Elasticsearch, Kafka, Redis, MySQL, PostgreSQL

Tools/Frameworks: Git, Docker, Node.js, React.js, Flask, Django, gRPC, GraphQL, Tensorflow, PyTorch, Keras, SciPy