Cassidy Diamond

cdiamond@cmu.edu | cassidydiamond.me

Education
May 2025

Carnegie Mellon University, Pittsburgh, PA   GPA: 3.51/4.0
Bachelor of Science in Computer Science; Dual Degree in Mathematics (Discrete Math and Logic)

Relevant Coursework: Introduction to Cryptography (15356), Constructive Logic (15317), Natural Language Processing (11411), Fundamentals of Programming Languages (15312), Parallel Computer Architecture and Programming (15418), Algebraic Structures (21373), Combinatorics (21301), Linear Algebra (21341)

Work Experience

Full Stack Developer and Researcher - Diderot   May 2023 - Aug 2024
- Received $550,000 in funding from NSF with Prof. Umut Acar, chosen as project Entrepreneurial Lead
- Created a virtual AI teaching assistant for university courses using generative large language models **(OpenAI, Django, Daphne, REST, AWS, PyTorch, NumPy, SciPy, nltk)**
- Built a frontend application for course management and chat messaging, available as a full website and as a widget **(TypeScript/React.js, AJAX, Websockets, NodeJS, HTML/CSS, Bootstrap)**
- Designed and managed enterprise-grade cloud infrastructure for webservers, API endpoints, load balancers, used by hundreds of students, thousands of daily API hits **(AWS, Sentry, Postgres, Docker)**
- Developed system to automatically gauge effectiveness of LLM responses using **nltk** and NLP methods
- Collaborated with AWS engineers, Duolingo, and Kleiner Perkins as part of startup development

Chief Engineer - WRCT Radio Station   May 2022 - Now
- Containerized and upgraded legacy programs with **Docker,** networked under an **Nginx** reverse proxy**;** migrated services to **Linux** cloud server
- Created **Bash, cron, and Python** scripts to automate radio tasks
- Integrated industry standard music charting software into **PHP/Wordpress** website following redesign
- Documented projects for future engineers, led engineering team, collaborated with community members
- Presented radio station infrastructure to engineers at Google Pittsburgh

Software Engineer - Pin Up Posters Courier Collective   October 2021 - November 2022
- Created and maintained web application to replace Google Suite with **Django, Mapbox GL JS**
- Delivered posters/handbills as a bike messenger, communicated with local businesses and nonprofits

Skills

Languages and Technologies: Python, C, C++, PHP, Java, SML, Javascript / Typescript/ NodeJS, Lua, Unity, Django, Linux, Bash, Git, Adobe Photoshop, Adobe Illustrator, CAD, Vim, Ham Radio (KJ7ORR)
ML Libraries: PyTorch, TensorFlow, NumPy, SciPy, nltk, OpenAI / genAI tools, HuggingFace
Frontend: HTML, CSS, React.js, TypeScript, Javascript, AJAX, jQuery, WebSockets, Vue.js, Bootstrap
Systems Administration/DevOps: AWS (EC2, RDS, S3, Elastic Beanstalk, Elasticache), Docker, Nginx, Certbot, Redis, Postgres, MariaDB, SQL, SMTP servers, DNS routing, Grafana, Sentry

Projects

WRCT Radio Music Database | *Django, Vue.js, Postgres, HTML/CSS, Docker, Git, Perl*
- Rebuilt 20+-year-old Perl music database from scratch*,* cataloging 100,000+ songs, artists, labels, and giving DJ's tools to collaboratively review new music. Closely integrated community feedback in design.

IP Over Ham Radio | *C, tun/tap (Linux kernel device), Ham Radio*
- Created a low-level program that sends modulated TCP packets from a proxy server to a client, allowing a computer to access the internet via audio (microphone) or ham radio.

Daily iMessage Zine | *Rust, Python, Lua, LaTeX, Docker*
- Produced a daily magazine of my iMessage text messages that would automatically print every morning. Pulled iMessage data on MacOS with Rust, formatted it with Python, and used Lua/LaTeX for design.