Lenh Nguyen

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PROFESSIONAL EXPERIENCE

The Johns Hopkins University Applied Physics Laboratory **Laurel, MD**
Software Engineer July 2022 – Present

- Developed a map-based full-stack web application that processes real-time data feed from over 7000 medical facilities across the United States, enabling swift and critical healthcare interventions during mass casualty incidents. Resulted in an opportunity to deploy pilot system to local hospital by the end of next year.
- Designed and developed a web-based common operating picture application that would allow analysts and decision makers in the information operation space to build social media analytics dashboard with real-time data streamed from third party sources.
- Leveraged a large language model to streamline healthcare crisis sitrep, reduced data collection and summarization pipeline processing time from 15 hours to a mere 3 minutes. These reports were briefed successfully to the sponsors.
- Maintained an internal translation service that is used daily by analysts and developers at APL.
- Maintained availability and serviceability for an internal data lake used by teams across the Lab. Spearheaded GitOps initiatives to deploy rigorous CI/CD pipelines, resulting in 80% reduction in deployment time and 30% reduction in merge request review time. These improvements resulted in enhanced code quality, team efficiency, and tremendous cost savings in hardware and labor.
- Designed and prototyped a stylometric system to fingerprint and attribute authorship from literary pattern, contributing to efforts to combat the rise of disinformation and ghost-writing. This system has inspired various internal research projects related to information operation and garnered interest from sponsor in information warfare domain.
- Optimized and parallelized ETL data pipeline for video data, resulted in 80% increase in throughput. Integrated with remote storage and image detection models for enhanced test and evaluation.
- Prototyped a proof-of-concept locally deployed LLM frontend to UAV operators as part of an IRAD. Briefed to program managers and successfully sought buy-in.

Textron Systems **Hunt Valley, MD**
Software Engineering Co-op Jan 2022 – June 2022

- Automated build for Universal Ground Control System (UGCS) product line using Jenkins.
- Developed scripts to identify, remediate, and test for vulnerabilities published by CVE database in variety of operating systems used by the UGCS.

EDUCATION

Johns Hopkins University **Baltimore, MD**
Master of Science, Computer Science 2024 - Ongoing

University of Maryland – Baltimore County (UMBC) **Baltimore, MD**
Bachelor of Science, Computer Science; GPA – 4.00 /4.00 August 2018 – May 2022
Dual Track: Cybersecurity & Data Science

TECHNICAL SKILLS

Programming Languages: Python, JavaScript/TypeScript, Shell.
Technical Knowledge: Docker, Kubernetes, Prefect, Celery, GitOps, Angular, Vue, FastAPI, Prometheus, ElasticSearch, Redis, MinIO, Kafka/RabbitMQ.

PERSONAL PROJECTS

Covid Tracker
Flask, React, PostgreSQL, AWS

- Architected and developed a Leaflet-enabled application that allows users to view COVID statistics such as positive cases, deaths, vaccination progress for state and county across United States.
- Maintained data ingestion pipeline with web scraping technique on reputable data sources such as the CDC.
- Automated application deployment using cloud infrastructure such as AWS Amplify, AWS RDS, and GitHub actions.