Alex Vu

📞 226-577-2312 | ✉ anvu6028@gmail.com | ⭘ github.com/anvu2002 | 🔗 linkedin.com/in/an-vu | 🔗 cyberanvu.co

Technical Skills

Languages	**Python**, **C#, JavaScript**, GraphQL, GoLang
Frameworks	FastAPI, Django, Go Gin, ReactJS, NodeJS, SpringBoot , Agile, .NET
Developer Tools	Docker Compose, Kubernetes, Helm Charts, RedHat OCP, Airflow, GitHub Action, ArgoCD, Jenkins Clusters, Elasticsearch, MongoDB, PostgreSQL, ARM Templates, Terraform, Celery, Redis, Kafka, ServiceNow API, Heroku

Experience

Software Developer Intern   Royal Bank of Canada
Jan 2024 – April 2024

- Developed **REST APIs** to interact with threat dataset (**Archer**) and managed **3000+** connections violation using **FastAPI** and **Pydantic** library.
- Built **Airflow DAGs** to migrate legacy email codebase (**Jinja2** templates, **EWS**, **Pydantics**) to Airflow server for email automation.
- Optimized an **ETL pipeline** of cyber threat data (**32GB**) using **Celery**, **RabbitMQ**, and **Redis** in a **microservice** architecture with **docker compose**, integrating **Elasticsearch Aggregation** for real-time threat anlaysis.
- Engineered an parsing tool (web-based) to validate firewall rule requests using **ReactJS**, **Redux**, and **ExpressJS**; optimized builds with **Webpack** and utilized **MongoDB** Atlas for analytics storage.
- Optimized **Helm Charts** for **Kubernetes YAML** templates to streamline the deployment of microservices to **RedHat OpenShift** (OCP) containers.

Cyber Security Engineering Intern   BlackBerry
May 2023 – Aug 2023

- Improved threat detection accuracy by **25%** using **pytest**, **unittest** based from **NIST guidelines** to assess the security posture of internal tools.
- Designed a terminal app (**PyCli**, Bash) to automate vulnerability assessment of python codebases using **pyTenable API** and covered **200+** attack techniques curated from **MITRE ATT&CK.**
- Containerized and deployed internal security tools on serverless **Kubernetes** clusters, leveraged **PostgreSQL** for threat data storage.

Cyber Security Architecture Intern   BlackBerry
Jan 2022 – April 2022

- Configured **Proofpoint DLP** rules for 14 use cases aligned with BlackBerry's data governance policies, reducing false positives to 1.2%.
- Conducted weekly Security Risk Assessments (**SOC2**, **ISO27001**, **ITSG**-33) for **20+ vendors** and 3rd party software, in collaboration with the SOC.
- Developed an IAM enhancement using **SAML** for SSO, **OAuth 2.0** for secure access, and **OpenID** Connect for streamlined authentication, leading to a **40% reduction** in login-related support tickets.
- Deployed the IAM project on serverless **Kubernetes** clusters with **HashiCorp Vault** for secure secret management, reducing authentication latency by 35% and improving system uptime by 25%.

Coding Instructor   Code Ninjas
Aug 2021 – Sept 2022

- Improved **150+ students** on development skill sets of **JavaScript**, **Unity**, and **C#** via project-based learning.

Projects

BubbleMathics | *ReactJS, Socket.io, MongoDB, RestAPI* 🔗   PropelAuth Award – HawkHacks 2024

- Won HawkHacks out of **900+** participants with a competitive Math Learning Platform.
- Developed the MERN Web stack with real-time quizzes, featuring Socket.io, MongoDB Atlas, PropelAuth API, and Framer Motion.

HeadSpace| `C#, Unity Coroutines, 3D AI, Voice-To-Text` 🔗   Hack The North 2024

- Designed a 3D Game in **Unity** that transforms journals into a dynamic 3D world reflecting users' thoughts and emotions.
- Engineered **multithreaded API** calls with **Unity Coroutines** enabling smooth voice-to-text (Picovoice) and 3D objects rendering with Sloyd AI.
- Developed custom **C# scripts** for game object instantiation and runtime asset management using **Addressables** for efficient memory usage.

FroggyFlow | *Python, Sklearn, OpenCV, NextJS, FastAPI* 🔗   Hack The 6ix 2024

- Implemented a **RandomForestClassifier** to train a model that alerts student posture quality from 3D sensor data (arduino gyroscope), utilizing **StandardScaler** for data preprocessing and achieved **95% accuracy.**
- Engineered scalable backend components serving ML models, featuring **FastAPI** and **StreamingResponse** for real-time video feeds.

Klink | *React, NextJS, Redux, SocketIO, Heroku, JavaScript* 🔗   2023 – present

- Engineered a **React** Web app with **Next.js** for SSR rendering and ShadCN, **FramerMotion** for clean UI, boosted mid content creators' networks by **45%** and ensuring seamless deployment on **Heroku** with scalable **web dyno** handling up to **5x traffic surges**.
- Utilized **SocketIO**, **Axios** with **Redux** to develop a dynamic chat platform that can handle high concurrency for over **10,000** active users.

Education

Fanshawe College   London, ON
*Advanced Diploma in Cyber Security, co-op endorsed, **3.96/4.0 GPA***   *Sep. 2020 – April 2024*