Alex Vu

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Technical Skills

Languages	JavaScript, GraphQL, .NET, GoLang, Python, C++
Frameworks	FastAPI, Django, Go Gin, ReactJS, NextJS, ExpressJS, Bootstrap, Agile
Developer Tools	Docker Compose, Kubernetes, RedHat OCP, Airflow, GitHub Action, ArgoCD, Jenkins Clusters, Elasticsearch, MongoDB, PostgreSQL, ARM Templates, Terraform, Celery, Redis, Kafka
Cyber Security	ISO27001, SOC2, NIST 800-171, ITSG-33, Wireshark, Kerberos, LDAP tools, VMWare ESXi, Proofpoint DLP, ExaBeam SIEM, Okta IAM (SAML & OAuth), Snort IPS, Grafana, Splunk

Experience

Software Developer Intern — Royal Bank of Canada
ELK, Django, JSON, python3, Airflow, Agile, OCP — *Jan 2024 – April 2024, Toronto*

- Configured DAG files and onboarded legacy email codebase (Jinja2 templates, EWS, Pydantics) to Airflow server for email automation.
- Developed REST APIs to interact with threat dataset (Archer) and managed 3000+ connections violation using Django, Pydantic library (Python) with a task queue distributed architecture through RabbitMQ, Redis, and Celery.
- Engineered a parsing utility (web-based) to validate firewall rule requests using ReactJS, Redux, and ExpressJS; optimized builds with Webpack and utilized MongoDB Atlas for analytics storage.
- Optimized 5 python codebases, assessed security vulnerabilities (Pylint, Bandit), and deployed to RedHat OCP containers.

Cyber Security Engineering Intern — BlackBerry
python3, ATT&CK, GRC, docker-compose, pyTenable — *May 2023 – Aug 2023, Waterloo*

- 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.
- Collaborated to build Python scripts (pytest, unittest) based from NIST guidelines to assess the security posture of internal tools, improving former detection accuracy by 25%.

Cyber Security Engineering Intern — BlackBerry
Proofpoint DLP, python3, docker-compose, OpenShift, SAML, OAuth, Vault — *Jan 2022 – April 2022, Waterloo*

- 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 team.
- Developed an IAM enhancement project using SAML for SSO, OAuth 2.0 for secure access, and OpenID Connect for streamlined authentication.
- 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
JavaScript, Lua, C#, Python3 — *Aug 2021 – Sept 2022, London*

- Designed an 8-month curriculum for 3D game development, focusing on object game design via Lua scripts & dynamic character development.
- Improved 70+ students on development skills for JavaScript, Unity, and C via project-based learning

Projects

BubbleMathics | *Multi-user Math Learning Platform* 🔗 — **PropelAuth Sponsor Award – HawkHacks 2024**

- Developed a Math learning platform to help kids with ADHD learn together by competing against others in real-time.
- Integrated Socket.io for real-time multiplayer Math Competitions and MongoDB Atlas for scalable cloud-based game statistics storage.
- Secured authentication with PropelAuth and npm concurrently for parallel execution of Vite and Node.js.
- Won HawkHacks, Laurier's largest hackathon, out of 900+ participants.

TransVLN | *Lecture to Video Generator* 🔗 — *Group Project*

- Engineered a micro-service architecture in Docker Compose, featuring FastAPI, RabbitMQ, and Redis.
- Accelerated ML model inference tasks through task queue distributed in Celery pre-fork.
- Utilized Go Gin for REST APIs with React and Three.js as frontend, leveraging goroutines and sync.RWMutex for concurrent executions.
- Integrated blip-image-captioning-large model from Salesforce in python REST API backend through FastAPI and gunicorn.

Education

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