Ahmad Hatziq

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Summary

Versatile Software Engineer passionate about problem-solving and lifelong learning, with a strong foundation in cyber security and cloud technologies. Holds a **Masters in Statistics** and professional certifications including **CISSP, Kubestronaut**, **AWS Solutions Architect (Associate), AWS Security**. Experienced in driving secure, scalable solutions across software development, data engineering, and DevOps disciplines.

Work Experience

Software Engineer (Security)   **Oct 2024 – Present**
Monetary Authority of Singapore, Security Architecture
- Collaborated with cross-functional development teams to implement security features into software solutions. Such as integrating advanced encryption (using AWS Encryption SDK, SQL Server Always Encrypt etc) to secure sensitive financial data
- Maintained and secured various CICD, Kubernetes and Cloud environments
- Analyzed cyber security data sets (alerts) and generated insights with Python, Pandas etc. Develop Python tools to integrate threat intelligence feeds and generate reports for other analysts.
- Conducted system reviews (risk and compliance assessments, DevSecOps, code review etc) to evaluate the adequacy of security controls leveraging frameworks such as the NIST Cybersecurity Framework, ISO 27000, and MITRE. Provided actionable recommendations to mitigate vulnerabilities
- Configure and finetune cybersecurity tools such as DAM, WAF, Splunk
- Contracted to MAS under Jobster

Software Engineer (DevOps / BackEnd)   **June 2023 – Oct 2024**
Amplify Health, Claims Automation
- Performed backend development, DevOps operations and DevSecOps responsibilities to support a machine learning insurance claims product, which identifies anomalous claims
- Developed backend APIs using Python & FastAPI, integrating route management and asynchronous workflow queing with Redis
- Led DevOps initiatives, establishing and maintaining CI/CD pipelines across GitLab, GitHub Actions, and Azure Pipelines for seamless integration and deployment
- Implemented robust security measures following DevSecOps practices, including Docker image hardening, scans, integration with vulnerability scanning using tools such as Trivy, Vera, Prisma, Bandit
- Enhanced application observability and reliability through the development of comprehensive reporting metrics and establishment of baseline performance standards
- Performed capacity-planning for containerized API workflows using Erlang queuing-theory models (median & 95th-percentile latencies) to calculate required Kubernetes pod count and underlying VM capacity — ensured SLA compliance while optimizing cluster sizing
- Technologies used: Python, GitLab, Kubernetes, GitHub Actions, BitBucket, Bash, Linux, Azure, AWS, FastAPI, Redis, rq, SQLAlchemy, MS SQL

Cyber Security Engineer   **July 2021 – June 2023**
Cyber Security Agency, Security Operations Centre (SOC)
- Developed cyber security tools, full-stack apps & APIs in Python, leveraging libraries such as Django, Requests
- Applied Python for web data scraping and analysis of cybersecurity datasets to identify trends and malicious activities, using libraries such as Pandas, Selenium, BeautifulSoup
- Investigated and triaged anomalous events by analyzing diverse logs (TCP, DNS, IP etc) and SIEMs
- Curated dashboards and intelligence reports, providing stakeholders with actionable insights augmented by Cyber Threat Intelligence

- Trained machine learning models (eg gradient boosting) to detect & classify malicious network activity and URLs based on network metrics, webpage data etc

Software Developer   **Aug 2019 – June 2020**

Infineon, Industrial Engineering
- Conceptualized, designed, and developed a full-stack Java-based decision-support system for automating virtual simulation processes in FlexSim
- Implemented back-end algorithms to perform business logic execution, data quality checks and optimize production schedules, thus enhancing the efficiency of factory processes
- Streamlined the simulation process, empowering line engineers to work more efficiently by automating various simulation runs with different settings, such as batch sizes and algorithms
- Integrated the back-end with dynamic Tableau dashboards to present comprehensive statistics, including cycle time and throughput, derived from the simulation results
- Technologies used: Java, JavaFx, Tableau, discrete event simulation, Apache POI

Software Engineer Intern (Data)   **Jan 2019 – July 2019**

Ministry of Manpower
- Collaborated with a team of developers to create ETL packages, using SQL and SSIS
- Created a proof-of-concept database using Columnar Indexes to demonstrate large performance benefits which aims to solve an existing problem of slow analytical query performance running on a primary key indexed database
- Performed data cleaning of encoded survey data using VBA to aid in understanding of survey results
- Created and maintained database schema using ER Studio, under the supervision of lead Data Architect
- Technologies used: SQL, SSIS, VBA, ER Studio, Power BI

IT Engineer (NS)   **Dec 2013 – Dec 2015**

Singapore Police Force
- Partnered with Division Technical Officer to manage and support IT operations such as providing L1 technical support and on-site assistance for end-users, manage user accounts in Windows AD, network troubleshooting
- Executed the migration of machines (tech refresh) from performing duties such as re-imaging new machines, data migration, degaussing HDDs

Education

National University of Singapore   **Aug 2016 – May 2021**
- **Master of Science, Statistics**
- **Bachelor of Engineering, Systems Engineering (Honors), Computer Science Minor**

Singapore University of Technology & Design   **July 2021 – Oct 2021**
- **Graduate Diploma, Cyber Security**

WorldQuant University   **Oct 2024 – Present (Ongoing)**
- **Master of Science, Financial Engineering**

Technologies, Languages, Certifications

- Professional Certs: CISSP, AZ-900 (Azure), AWS Solutions Architect (Associate), AWS Security, Kubestronaut
- Languages: Python, Java, Go, JavaScript, VBA
- Technologies: AWS, Azure, Kubernetes, Docker, Git, GitHub Actions
- Frameworks: Django, React, React Native,
- Cyber Security: CEH, Cisco CyberOps, DevSecOps, Blue Team Level 2, Advanced Threat Hunting
- Other Online Courses: Systems Design, Data Engineering, Big Data Analytics in Spark