Minh Quang Vu

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SUMMARY

A driven and impact-focused Software Engineer with ~3 years of experience developing large-scale distributed systems at Microsoft. Proven track record of leading major infrastructure initiatives and delivering critical deployment and end-to-end feature projects.

SKILLS

- **Programming Languages**: C#, C++, Python, Java, JavaScript, R, SQL
- **Web & Cloud Technologies**: .NET, NodeJS, HTML, CSS, Cloud Computing, Software-Defined Networking, Azure Networking Services, Azure Portal & CLI
- **Data Science & Machine Learning**: KQL, Matplotlib, Numpy, Scikit-learn, Pandas, Tensorflow, Keras (Deep Learning with DNN, CNN), Jupyter Notebook (features engineering, hyperparameters tuning, model evaluation), OpenCV
- **Software Engineering Practices**: Object-oriented programming, Data structure and Algorithms, Software development processes, Large scale distributed systems, Azure DevOps CI/CD pipeline, Microservice architecture, Version control systems

WORK EXPERIENCE

Software Engineer **Redmond, WA** **August 2022 – Present**

Microsoft, Azure Software Defined Networking Control Plane

- Spearheaded and driven to completion **two large-scale backfilling initiatives**, ensuring data consistency across multiple systems by utilizing Azure DevOps CI/CD pipeline to republish **~300,000 NICs and vnets** to PubSub
- Authored a comprehensive deployment TSG that enabled **10+ developers** to resolve resource state mismatches independently; served as the **go-to expert** for republishing strategies, while proactively delivered **5 code fixes** to eliminate systemic leakage scenarios
- Owned two **end-to-end** feature projects, encompassing the planning and creation of design documentation, organization of work items, execution of code changes, and setup of tests and performance monitoring dashboards
- Successfully enabled subnetId allocation feature flag across Production regions, onboarding ~**1M vnets** to the feature with **zero livesite issues;** currently in the process of enabling the feature flag for IDnsZoneAcIId allocation
- Developed logic for **Disaster Recovery initiative** to bypass publishing and creating republishing tasks to failing PubSub endpoints, reducing stale republishing tasks by **10x**; proactively conducted a team-wide drill and presentation to enhance operational readiness
- Led **four SFI initiatives** to fortify RNM service security, including by reducing stale resource groups by **90% (from 500+ down to 50)**, patching **30+** subnets with NSGs, integrating **10+** APIs into the JIT-required platform, and enforcing **~10** SLNM-aligned security policies
- Addressed an average of **80 CRIs and sev2s** annually during on-call rotations, ensuring the health of 3 services: RNM, RNC, and PE-PLS

C++ Software Engineer Intern **Hanoi, Vietnam** **February 2021 – May 2021**

FPT Software

- Co-led training sessions of object-oriented programming concepts in C++ for more than 10 software engineer interns
- Implemented the Controller component for the game of Gomuku utilizing the MVC model during training sessions
- Developed software for a Japanese automotive brand in a 15-member team, following the V-model process
- Utilized internal tools to execute unit tests and integration tests, ensuring software reliability

Big Data/ Machine Learning Research Intern **Hanoi, Vietnam** **August 2020 – October 2020**

MobiFone Research and Development Center

- Reported to a group of 5 researchers on the mathematical aspect of different Machine Learning algorithms such as Linear Regression, Logistic Regression, Gradient Descent, K-means Clustering, SVM

EDUCATION

Clark University **Worcester, MA** **May 2022**

- Bachelor of Arts, Majors: Computer Science & Economics | Minor: Data Science
- Global Scholar Program | Overall GPA: 3.81 / 4.00 | Computer Science GPA: 3.78 / 4.00 | Economics GPA: 3.97 / 4.00
- TA for Intro to Computing and Intro to Data Science

PROJECTS

Fullstack Developer **Worcester, MA** **July 2021 – May 2022**

CougarAsk /Computer Science Honor Thesis

- Developed a RESTful Q&A platform for Clark students, professors, and alumni to exchange knowledge seamlessly
- Implemented JavaScript-based routing protocols for seamless CRUD operations, leveraging Node.js, Express, and MongoDB to ensure efficient data management
- Designed and built an intuitive, responsive front-end using HTML, CSS, Bootstrap 5, and Handlebars
- Currently refining data storage and retrieval mechanisms to enhance search efficiency

Economics Capstone **Worcester, MA** **July 2021 – December 2021**

- Preprocessed the Home Credit Default Risk dataset to enable robust predictive modeling for loan repayment risk assessment
- Applied Feature Engineering and Dimensionality Reduction to optimize input data, enhancing model efficiency and interpretability
- Developed a Decision Tree-based binary classification model, achieving an **~80% accuracy** rate, while leveraging feature importance rankings to improve insights into loan repayment behaviors