TRAN Huu Hoang
Software Engineer

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A highly technical and detail-oriented Software Engineer with 2.5 years of experience, and currently pursuing a Master's Degree in Computer Science. Passionate about solving challenging problems and building critical and meaningful software products. Looking for an opportunity as a Full-stack/Backend Software Engineer in Singapore.

Experience

Bank of America Merrill Lynch   *Jul 2021 - Present*

Assistant Vice President - Software Engineer II   *Feb 2024 - Present*
- Take more leadership roles by owning projects and domain knowledge in Post Trade domain.

Software Engineer II   *Jul 2023 - Jan 2024*
- Responsible for the design and ownership of multiple services/systems including Message Processing Services (**AMPS**) services, data pipeline services, post-trading reconciliations, and many web application features.
- One notable mention is the design (and ownership) of a performance-critical message streaming service, to integrate multiple external systems (upstream data, breach management service, etc.) into the company's Post Trading system.

Software Engineer   *Jul 2021 - Jul 2023*
- Develop and maintain web applications for trading systems: Implement robust and scalable features; build microservices + APIs. The web applications fully automate the post-trading validation process, consuming millions of trading data daily.
- Work on all web technology stacks: frontend, backend, and database. Technology stack: **Python** (Flask), **ReactJS**, **MySQL**.
- Notable project: Fully implemented a breach management system that automates the detection and storage processes of all trading breaches (for regulatory reports), which consumes millions of records and messages daily.
- Implement data storage + pipelines, post-trading validation algorithms, and reporting tools for the bank's trading systems.

Software Engineer Intern at **Bank of America Merrill Lynch**   *June 2020 - Aug 2020*
- Backend development with **Scala** and **AMPS** (Advanced Message Processing System).
- Implement new features and tests for the trading systems' security requirements. One notable achievement is to fix the validation and logging logic of a data processing stream, which helps spot and report multiple errors on time.
- Continuous Integration/Development: build .yaml files, deploy and test with **Jenkins** and **Ansible**.

Software Engineer Intern at **Infineon Technologies**   *Aug 2019 - Dec 2019*
- Build web applications with **Java Spring Boot** and **HTML/CSS/Javascript**.
- Implement a data stream pipeline to fetch and process data from security cameras and display real-time on the website, with **Python** and **MySQL**. Machine learning models and **OpenCV** are integrated for detecting vehicles and obstacles.

Junior Data Scientist Intern at **Glints**   *May 2019 - Aug 2019*
- Improve performance of data processing for the company's AI recommendation backend with **Python multithreading**.
- Data mining and visualization to investigate the link between skillsets and job titles. Improve the company's job recommendation based on findings. The improvement resulted in a 50% increase in interactiveness in that quarter.
- Build data maintenance services for **PostgreSQL** database using **Python**, **Docker**, and **AWS**.

Education

Georgia Institute of Technology   *Aug 2023 - Present*
- **Master of Science in Computer Science** (in progress). *Current GPA: 4.0/4.0*
- Major projects:
  - High-Performance Computing: Implement from scratch multiple parallel algorithms (Helman and JáJá, Bucket Sort) with distributed memory and multithreading models. Optimize the algorithms with OpenMP, MPI, and CUDA (attained over 16x runtime speedup).
  - Database Management: Implement a PostgreSQL DBMS web application, allowing users to buy/sell/manage retailed vehicles.

Nanyang Technological University   *Aug 2017 - June 2021*
- **Bachelor's Degree in Computer Science**
- Graduated with **Honors (Highest Distinction)**. *GPA: 4.65/5*
- Graduated with Electives Focuses: **Networking and Mobility** and **Data Science and Analytics**

Skills

| Python | Flask | JavaScript | React | Java | Spring Boot | SQL |
| Git | Docker | AWS | Redux | GO lang | AMPS | PostgreSQL |