Bao Quoc Phan

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EDUCATION

Purdue University   West Lafayette, IN
Bachelor of Science in Computer Science   *Expected May 2025*
- Major GPA: 3.58/4.00

TECHNICAL SKILLS

Languages: Java, Golang, C/C++, JavaScript/TypeScript, SQL, Bash, C#, HTML/CSS, NodeJS, Matlab, Python
Technologies: Docker, AWS, GCP, Azure, Kafka, Redis, Elasticsearch, Debezium, Git, MinIO, Swagger
Frameworks: Spring/Spring Boot, Gin, ReactJS, Ant Design, Material UI, OpenGL

EXPERIENCE

Java Backend Intern   Ho Chi Minh, Vietnam
FPT Software | Java, Spring Boot, GCP, Kafka, Debezium, PostgreSQL, Redis, Docker   *May. 2024 - Aug. 2024*
- Led a team of 9 interns in developing a microservices-based Learning Management System (LMS) prototype using Java Spring Boot, containerized with Docker, and deployed on GCP
- Utilized Kafka for asynchronous processing of long-running tasks, boosting system efficiency, enhancing client responsiveness, and services scalability and availability
- Applied CDC from PostgreSQL to Elasticsearch using Debezium and Kafka, enabling full-context search capability
- Implemented cache-aside strategy with Redis as a distributed cache to optimize performance
- Integrated VNPay and MoMo payment providers into the LMS to enable seamless and secured payment processing

Undergraduate Research Fellow   West Lafayette, IN
JRL Lab - Purdue University | C++, Unreal Engine   *May. 2023 - Aug. 2023*
- Developed a configurable level III driving simulation using Unreal Engine 5.1 and C++ as a testbed for a cutting-edge NSF-granted automated driving research
- Created a low-latency data streaming pipeline for analysis by utilizing UDP

Full Stack Developer Intern   (Remote) Ho Chi Minh, Vietnam
OplaCRM | ReactJS, TypeScript, Golang, Gin, PostgreSQL   *Jan. 2023 - Apr. 2023*
- Developed a full-stack e-commerce used by more than 20 corporations and 40 partners with Gin and PostgreSQL
- Developed and customized multiple React components based on new layout designs created in Figma

PROJECTS

Petinder | *Java, Spring Boot, Docker, PostgreSQL*   Jun. 2024 - Present
- Developed a microservices backend API that is similar to Tinder but for pets
- Used RabbitMQ as a message broker for services communication, decoupling the backend services
- Implemented OAuth2 login with Google/GitHub using Spring Security
- Implemented full context search for pets using PostgreSQL's Full-Text Search

Cloud Alloc | *Java, Spring Boot, Docker, PostgreSQL, Kafka, MinIO*   May. 2024 - Present
- Developed a Spring Boot API to manage multiple Google Drive and Dropbox accounts, allowing users to upload, delete, and download files from multiple Google/Dropbox accounts within the same app
- Used PostgreSQL as a DB, and Redis as a cache for the cache-aside pattern
- Implementing CDC using Debezium and Kafka to sync data near real-time from PostgreSQL and Drive to ElasticSearch, enabling full-context search over both file metadata and file contents
- Implemented lazy updating using MinIO as a cache for file updates, decreasing API calls to Drive and Dropbox

Personal Finance App | *AWS, Java, ReactJS, JavaScript, PostgreSQL*   Oct. 2023 - Dec. 2023
- Created a responsive dashboard UI to display transactions and statistics using ReactJS and Material UI
- Developed a highly scalable serverless backend using Java, AWS Lambda, and AWS RDS for PostgreSQL
- Utilized AWS API Gateway for load balancing and exposing the API

Photo Gallery | *Golang, HTML/CSS, PostgreSQL*   Dec. 2023 - Mar. 2024
- Developed a monolithic web app in Golang using MVC architecture to store and share users's photos
- Implemented a secure user authentication system from scratch in Golang, utilizing salt and pepper encryption methods and protecting against CSRF attacks with gorilla/csrf
- Developed robust gallery management features, enabling users to create, edit, and share galleries effortlessly