PHUC NGUYEN

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EDUCATION

George Mason University, *B.S. in Computer Science, Expected May 2025* **Fairfax, VA**
- <u>Relevant Coursework:</u> Introduction to Database, Data Mining, Data Structures, Computer Systems and Programming, Operating Systems, Mobile Application Development, Software Engineering, Networking, Introduction to Artificial Intelligence
- <u>Skills:</u> Programming (**Python, Java, Kotlin, JavaScript, TypeScript, SQL, C++, C**), Web Development (**React.js, Next.js, Express.js, Flask, NestJS, Django, HTML, CSS**), Database Management (**MongoDB, PostgreSQL, SQLite**), Cloud & DevOps (**AWS (Lambda, S3), Docker**), **Tools** (Git, Postman)

EXPERIENCE

Quokka.io **Arlington, VA**
Software Engineering R&D Intern *June 2024 – August 2024*
- Developed and optimized **back-end API services** using **NestJS and Koa**, improving **system efficiency** and boosting **customer satisfaction** by **20%**
- Conducted **unit and end-to-end testing** using **Jest and Supertest**, ensuring data integrity and achieving **80% accuracy in validation services**
- Designed and implemented **JSON schema validation** using **class-validator**, improving **API data consistency** and expanding **validation coverage** by **50%**
- Utilized **Docker** for containerization, ensuring **consistent deployment across development, testing, and production**
- Identified and resolved API inefficiencies, optimizing **data processing and request handling, improving system reliability**

George Mason University- College of Engineering and Computing **Fairfax, VA**
Teaching Assistant for Object-Oriented Programming Course *August 2023 – December 2023*
- Supported **50+ students** in **Object-Oriented Programming (OOP), Data Structures, Debugging, and Testing,** improving their problem-solving skills
- Assisted students in implementing assignments and projects, providing **targeted guidance to enhance their coding proficiency and understanding of OOP principles**
- Instructed students in using **Java IDEs (IntelliJ IDEA, Eclipse, NetBeans)** to develop structured, maintainable, and efficient code

PROJECTS

Gather Mason
- Built a **full-stack event management platform** with **Node.js**, **Express**, **MongoDB**, and **React**, enabling students to create, join, and manage events efficiently
- Enforced **secure role-based permissions**, restricting event updates and deletions to authenticated creators and preserving **data integrity**
- **Automated email reminders** using **AWS Lambda**, **EventBridge**, and **Nodemailer** to notify users of upcoming events, enhancing user engagement
- Developed a **dynamic, responsive UI** with **React** and **RESTful APIs**, supporting **real-time filtering**, **participation tracking**, and **smooth user interaction**

Amazing Email Organizer
- Developed a **full-stack task management app** using **Flask and React**, enabling users to **organize actionable emails into tasks and sync deadlines with Google Calendar**
- Integrated **Google OAuth2 and Gmail API** for secure account linking and real-time retrieval of actionable emails with dynamic session and token management
- Leveraged **OpenAI's GPT-3.5 API** to **analyze and categorize email content, auto-generating structured tasks** for improved productivity
- Implemented a **hybrid asynchronous system using Celery, Redis, and Flask-Scheduler** to balance real-time email processing with **scheduled checks**, ensuring no actionable email is missed