Pham Hoang Duy

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EDUCATION

Michigan State University   **Aug 2022 - May 2026**
Bachelor of Science, Computer Science
- **GPA:** 3.82
- **Achievements:** Honored in Dean's List 5 times.
- **Coursework:** Object-oriented Software Development, Algorithm Engineering, Information Management and the Cloud, Computer Organization and Architecture, Web Application Architecture and Development, Database System, Computer Systems, Big Data Analysis

EXPERIENCE

MSU Computer Science Department   **Present**
Undergraduate Learning Assistant
- Graded **15** students' object-oriented projects and UML diagram weekly, providing constructive feedback and necessary fixes to enhance their understanding, which helped making it a **4.0** median class in Fall semester.
- Participated in **10** interactive hours per week to address students' coding projects and debug errors, improving their problem-solving skills with C++ programming and drawing UML class diagram drawing.

Techcom Securities   **May 2023 - Aug 2023**
Software Engineering Internship   *Hanoi, Vietnam*
- Participated in developing a margin loan product for Techcombank, enabling customers to secure loans on the stock exchange, assisting **1M+** customer visits per day for the TCInvest system.
- Developed a new back-end web application for this product using Java, Maven, JDBC, and Docker, which streamlined the deployment process and improved system performance.
- Contributed **10** tasks using Git and Jira to navigate with the team, mainly leading to improved loan information accessibility for the customers.
- Developed REST APIs with more than **1K+** lines of Java code for APIs and unit testing to efficiently call or store data from the database, improving data retrieval speed.

PROJECTS

Microservice Application
Flask, Python, Docker, SQL, API   **Oct 2024**
- Developed and deployed a document management system utilizing Flask microservices using Python, with distinct functionalities for user management, document creation/editing, logging, and document searching, all integrated via Docker networking.
- Designed multiple SQL Lite databases for microservices, documented system architecture, database schemas, and API specifications, also ensuring secure data handling with SQL injection preventing.
- Created robust APIs and inter-service communication endpoints, including JWT-based authentication and authorization for seamless integration across microservices.

Skatebrawl
C#, Unity, GitLab   **Feb 2024 - Apr 2024**
- Developed a 3D fighting game in Unity with a group of 7 students using GitLab and Trello for project management, **top 5** best game voted by MSU alumni for MI 455 Fall Semester class.
- Contributed about **400** lines of C# code, which focus on design and optimize collision detection and state management systems for fast-paced gameplay transitions.
- Engineered dynamic transition control and selective axis rotation, enabling mid-air combat mechanics and fluid character movement.
- Debugged and resolved complex physics issues, enhancing combat responsiveness and overall game performance.

Music game
C++, OOP, Leadership, XML   **Feb 2024 - Apr 2024**
- Collaborated with 4 students on GitLab and Trello to design this project in 8 weeks, contributed about **2K** lines of code which focus on creating base class and loading XML file.
- Participated as a team lead, using Trello and GitLab for project progress management. Hosted a meeting every week to review and planning for the project flow.
- Implemented game play and game visualization by C++ object oriented programming with wx widget and maSound framework.

TECHNICAL SKILLS

- **Languages:** Java, Python, C/C++, SQL, Assembly, C#, HTML
- **Tools:** Gits, wxWidgets, Docker, Spring Boot, Unity, Jira, GCP, GitHub, VS Code, Jenkins, JIRA, Postman
- **Database:** SQL (PostgreSQL, MySQL), NoSQL (MongoDB)