First name, Last name

(Phone) | (Email) | (Linkedin) | Github

Education

(University Name) City, State
Bachelor of Science, Computer Science — GPA: 4.0/4.0 *2023 - 2027*

Technical Skills

Languages: C++, C#, Java, Python, GLSL, SQL
Frameworks: Unity, Qt5, Spring Boot, Django, SFML, OpenGL
Developer Tools: Git, MySQL, PostgreSQL, Postman, DBeaver, Visual Studio, Visual Studio Code

Experience

Undergraduate Research Assistant Feb. 2024 – Present
Center Name *City, State*

- Partnered with Graduate students in developing a Unity-based VR + AR application using C# to support job seekers with disabilities.

Software Development Intern Oct. 2022 – Jul. 2023
FPT Information System *Hanoi, Viet Nam*

- Developed **70+ RESTful APIs** using Spring MVC, handling dataset of up to **100k records** using Spring JPA with PostgreSQL and MySQL.
- Migrated APIs and reconnected database tables from the company's unfinished Node.js project to Java Spring.
- Automated lightweight authentication and authorization systems using Spring Security.

Projects

Parser & Computer Algebra System (CAS) | *C++, SFML* Oct. 2023 – Dec. 2023

- Handled up to **10k mathematical characters** parsing with Pratt Parser.
- Designed a Computer Algebra System (CAS) that automatically reorders and simplifies mathematical expressions using principles from "Computer Algebra and Symbolic Computation" by Joel S. Cohen.

Underwater Physic Engine | *C++, SFML* Jul. 2023 – Aug. 2023

- Utilized Verlet and Euler Intergration to simulate constrained system and spring-damper model of up to **20k constraints/springs** running at **60+ FPS**; combined with L-System computation to simulate aquatic greenery.
- Implemented Perlin flowfield and Flocking algorithm to create realistic underwater boids simulation of 500+ entities.

Microscopic Traffic Simulator | *C++, SFML* Mar. 2023 – Jul. 2023

- Evaluated the Intelligent Driver Model (IDM) to simulate traffic of up to **200+ cars**.
- Coded traffic lights and intersections, on which cars can dynamically avoid and queue.
- Construct, alter, and save up to 50+ new tiles using the JSON format.

Graph Drawer | *C#, Unity*

- Adapted Unity's physics and GUI system to help competitive programmers design and modify directed/undirected graphs of up to 50 nodes.
- Visualized graph-related algorithms: DFS, BFS, Djikstra, Bridges and Articulation Points, Strongly Connected Components (Tarjan's algorithm)

Honors & Awards

Second prize, (School name) Informatics Competition for High School Students
First place, (School name) Devfest (City name) 2023

Organizations

Organizer | **(School name) Hackathon 2022** Jun. 2022 - Aug. 2022

- Coordinated with the organizing team to prepare problem statements and design solutions for **40+ contestants**.
- Developed an interactive application using Unity & C# for contestants' usage.