

# Manh Tran

070 321 5275 | Hanoi, Viet Nam | [tran.ma@northeastern.edu](mailto:tran.ma@northeastern.edu) | [GitHub](#) | [LinkedIn](#)

## Education

---

**Northeastern University**, Boston, MA

September 2021 - May 2025

**Khoury College of Computer Sciences**

Bachelor of Science in Computer Sciences – Honors Program

- GPA: 3.8/4.0 | Dean's List Fall 2021, Spring 2022, Spring 2024
- Related Courses: Object-Oriented Design, Algorithms and Data, Theory of Computation, Computer Systems, Network and Distributed Systems, Fundamentals of Software Engineering, System Security

## Work Experience

---

**Software Engineer Intern**

June 2024 - September 2024

HIDECC

Hanoi, Vietnam

- Migrated key Hospital Information System components to microservices by developing appointment and patient record services, improving communication efficiency, improving communication efficiency by 30%
- Redesigned system to utilize Docker containers and a RabbitMQ message broker to distribute background tasks, improving deployment flexibility and scalability by 20%

**Quality Assurance Automation Co-op**

Jan 2023 – June 2023

MFS Investment Management

Boston, MA

- Delivered 3 full-scale projects in 6 months, exceeding the typical project load for an intern cycle (medium 2)
- Automated end-to-end UI/UX testing for 3 flagship applications by developing 62 Test Complete scripts, reduced the need for manual testing by 25% and increased test coverage to 98%
- Supervised and documented API with Postman and automated Jenkin jobs, which run 15 test suites weekly enhanced robustness by 15%
- Supported Agile project delivery by participating in weekly Kanban sprints, helping to close 54 tickets through validation of new working test suites for internal financial application

## Projects

---

**Distributed Key Value Database** | [GitHub](#)

March 2024 – May 2024

- Implemented a distributed, strongly consistent key-value store using the Raft consensus protocol, ensuring safe replication and leader election across multiple nodes
- Designed a Raft-based log replication mechanism to ensure data consistency across crash-prone replicas, handling client put() and get() requests with correctness and low latency
- Developed a leader election and heartbeat mechanism using Raft's AppendEntries and RequestVote RPCs, with randomized timeouts and failover detection
- Passed correctness and performance benchmarks on 20+ test configurations, with metrics including duplicate suppression, request latency, and message minimization

**Grocery Store** | [GitHub](#)

February - April 2024

- Led a 3-person team to deliver a full project, ensuring quality delivery across all phases of development
- Enhanced Covey Town, a NodeJS-based social platform by designing and integrating a new Grocery Store feature employing Typescript on the backend, leveraging Supabase database API to monitor users' information
- Architected automated testing solution using Jest to control integration failure and achieve 95% test coverage, combined with GitHub CI/CD pipeline to monitor project status
- Designed front-end components and user interactions with React and Phaser APIs

**Rise From The Ashes** | [GitHub](#) | [Unity](#)

April – June 2024

- A passion game made with Unity with an adventure-based story with more than 200 playthroughs
- Develop with C# and existing Unity functionalities to implement core gameplay and interactive experiences
- Designed animations sequences with Unity and 3D model with Blenders, improving player experience

## Technical Skills

---

**Languages:** Java, TypeScript, Python, JavaScript

**Frameworks/Tools:** Docker, RabbitMQ, Node.js, Jest, Git, Jira, Test Complete

**Methodologies:** Agile/Scrum, Test-Driven Development