

Xinyu Hou

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EDUCATION

Northeastern University

MASTER OF SCIENCE IN COMPUTER SCIENCE

Boston, MA | Jan 2021 - Apr 2023

University of Virginia

BACHELOR OF ARTS WITH HIGH DISTINCTION IN PSYCHOLOGY AND COMPUTER SCIENCE

Charlottesville, VA | Aug 2016 - Dec 2020

SKILLS

Programming Languages: Java, JavaScript, Python, C#, C++, Golang, Bash, SQL, R, Prolog, OCaml, YAML, HTML/CSS

Technology: AWS, Azure, Git, GitHub Actions, Perforce, BitBucket, Jira, Docker, Kubernetes, Maven, Postman, Swagger, AnyDesk, TigerVNC, HashiCorp Vault, React, Unity, MySQL, MongoDB, SPSS, Qualtrics, Microsoft Office Suite, Adobe Premiere Pro, L^AT_EX

Languages: Native in Chinese, Fluent in English, Intermediate in German

Certifications: AWS Certified Solutions Architect - Associate, Microsoft Certified Azure Fundamentals

Relevant Courses: Programming Design Paradigm, Program & Data Representation, Mobile Application Development, Web Development, Computer Architecture, Algorithms, Database Systems, Artificial Intelligence, Computer Vision, Cloud Computing

WORK EXPERIENCE

Software Engineer in Test | THE MATHWORKS INC.

Feb 2025 – Present

Engineer in Engineering Development Group | THE MATHWORKS INC.

Jun 2023 – Feb 2025

Engineering Development Group Intern | THE MATHWORKS INC.

May 2022 – Aug 2022

- Built a Music Visualization app using **MATLAB App Designer** and won 3rd place among 70+ team projects in the Natick Hack Day 2022 event
- Developed a test strategy for a product integration project by collaborating with multiple teams
- Created a test framework with **Golang** that performed automated qualification for product workflows

Software Engineering Co-op | QUANTUM DIAMOND TECHNOLOGIES INC.

Dec 2021 – May 2022

- Implemented an **ASP.NET Web API** with **C#** that authenticated users and uploaded experiment info to an **Azure Database for MySQL**, speeding up the upload process from minutes to seconds
- Built a more efficient deployment pipeline using Deployment Slots in **Azure App Service**, which allowed developers to validate web app changes before, or roll back deployments after, promoting to production
- Maintained and improved a **Razor Pages web app** by fixing existing bugs and implementing 5+ enhancements

Graduate Teaching Assistant | KHOURY COLLEGE, NORTHEASTERN UNIVERSITY

May 2021 – Dec 2022

- Held 7 hours of office hour per week mentoring students about the concepts of Object-Oriented Programming, such as object, class, method, interface, encapsulation, polymorphism, inheritance, and design patterns

Graduate Research Assistant | PROF ALEXANDRA TO'S LAB, NORTHEASTERN UNIVERSITY

May 2021 – Aug 2021

- Developed an **interactive fiction game** that teaches people how to be allies to someone who experiences microaggression using **Twine** and the **Transformational Framework**
- Conducted literature reviews and presented recent research publications in weekly lab meetings

PROJECTS

Eventory Web App

Jan 2023 – April 2023

CS 5610 Web Development Project

- Designed and developed an event management web app using **React.js** for the frontend and **Node.js** for the backend
- Implemented a **RESTful API** using **Node.js** and the **Express.js** framework to authenticate and authorize users, integrate **third-party API**, and interact with the **MongoDB** database

Peak Mobile App

Aug 2022 – Dec 2022

CS 5520 Mobile Application Development Project

- Designed and developed a budgeting app that helped users track their expenses and build better spending habits using **Java**, **XML**, **Android SDK**, and **SQLite database**
- Implemented features such as expense tracking, budget planning, expenditure analysis, receipt capture via device camera, and password authentication for enhanced security