

Andrew Liu

liu.and@northeastern.edu | 216-633-6486 | Boston, MA | github.com/aliu19 | aliu19.github.io

Education

Northeastern University, Boston, MA Aug. 2019 – Present
Khoury College of Computer Sciences
Candidate for Bachelor of Science in Computer Science May 2023
Candidate for Master of Science in Computer Science Exp. May 2024
Honors: GPA: 3.5/4.0, Dean's List
Relevant Coursework: Object-Oriented Design | Algorithms and Data | Computer Systems (grad) | Discrete Structures | Web Development (grad) | Mathematics of Data Models | Linear Algebra | Probability & Statistics | Foundations of Software Eng. (grad) | Programming in C++ | Networks and Distributed Systems

Technical Knowledge

Languages: Java | Python | C | C# | Typescript | Javascript | HTML | CSS/SCSS | C++ | SQL | Bash | Racket/ACL2S (Scheme) | Verilog | AMD64/MIPS Assembly
Frameworks / Libraries: Angular | React | Node.js | Bootstrap | JQuery | Spring Boot | Redux | Express | MongoDB | Mongoose | MySQL | PostgreSQL
Tools: Git | Github | Microsoft TFS | Azure DevOps | Visual Studio 2019 | AWS | GDB | Valgrind | Windows Server 2012 IIS | macOS | Windows | Linux

Work Experience

Software Development Co-op, **Desktop Metal**, Burlington, MA July 2022 – Jan. 2023

- Develop and test ML/DL models with PyTorch and OpenVINO to detect metal 3D printing errors
- Set up Computer Vision Annotation Tool server to run custom-trained ML models with Docker and Nuclio

Software Engineer Co-op, **Verisk (AIR Worldwide)**, Boston, MA July – Dec. 2021

- Developed and enhanced analytic reporting components from UX wireframes for the Cyber Risk Navigator application using Angular 12 and Typescript
- Designed and implemented a REST API using ASP.Net core and C#, documenting and testing it with Swagger UI
- Followed Agile methodology on a scrum team to plan and complete user stories and sprint tasks
- Implemented and tested analysis models from Verisk's Next Generation Models in PostgreSQL, C#, and AWS

Geospatial Web Developer, **Davey Resource Group, Inc.**, Akron, OH May 2021 – Aug. 2022

- Developed new features to the TreeKeeper Canopy web application using Angular 11, Typescript, and Node.js
- Planned and developed custom websites with low-fidelity wireframes to fulfill client criteria
- Designed and managed MongoDB and PostgreSQL databases, using Linux and Windows servers respectively

Graphics and Visualizations Lab Intern, **NASA Glenn Research Center**, Cleveland, OH June 2016 – Aug. 2019

- Planned and built a high graphics desktop with custom designed CAD parts to run an augmented reality sandbox
- Created additional features to add and drain water globally from mapped hand motions

Projects

Bookify (*React, Node, Redux, MongoDB, Express, Mongoose, Javascript, HTML, CSS*)

- Created a MERN stack web app to create an account in a MongoDB database, and used the Google Books API to search a book, and create book lists and reviews to the books from the users

Shape Animator (*Java*)

- Created a MVC architecture shape animator application that builds and edits 2D shape animations using Swing

Distributed Key-Value Database (*Python*)

- Built a distributed, replicated key-value datastore using a simplified version of the Raft consensus protocol.

Miscellaneous

Languages: English (native), Mandarin (proficient), Spanish (familiar)
Interests: Cooking, Badminton, Manga, Stardew Valley, Theatre