

SHIJUN CAO

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EDUCATION

Northeastern University

Master of Science in Information System

University of Illinois at Urbana-Champaign

Bachelor of Engineering in System Engineering and Design

Minor in Computer Science

Boston, MA

Excepted Graduation: April 2022

Champaign-Urbana, IL

Aug 2015 - Dec 2019

SKILLS

Programming languages: Java, TypeScript, JavaScript, Python, C++, HTML5, CSS3, SASS, Java, SQL

Web Frameworks: Angular7+, RxJs, React/Redux, Django, Node.js

Architecture: MVC design pattern, Hibernate, Reactive Programming REST APIs, Agile Development

EXPERIENCE

Motorola solutions

Boston, MA

Software Engineer Coop

Jan 2021 – Present

- Work as a full stack software engineer in Motorola's CTO team for the research and development of cutting-edge video security solutions and public safety technologies.
- Lead development and maintenance of a Angular9-based website (with Django backend) to provide customers with a solution for the real-time teleoperation and spectating of drone flights used by first responders.
- Created detailed unit tests to make sure every single piece of components and functionality were tested rigorously in an automated fashion.
- Participated in specification, design, implementation, evangelism, and support of the product, getting customer feedbacks to improve existing features and product performance.
- Configured continuous integration and delivery pipeline for automated deployment to AWS.

Northeastern University

Boston, MA

Research Assistant

Jan 2020 – Feb 2020

- Responsible for the customization of the latest Microsoft Azure Kinect sensor by implementing the SDK provided by Microsoft to meet demand of different companies.
- Increased Azure Kinect Sensor depth frame cycles by 30% to process a body frame by restructuring the algorithm.
- Interacting the process of Kinect capture systems by implementing a custom algorithm to render 3D vector graphics using OpenGL.

PROJECTS

Portfolio website (HTML, CSS) Access here: <https://shijun-cao-site.herokuapp.com>

CAPE Aerial Telepresence App by Motorola Solutions (Angular, Django, TypeScript, Python, 2021)

- An Angular based website with Django backend that can control drones to provide livestream, evidence capture as well as remote operation for public safety department.
- Develop and design a variety of new features on front-end teleoperation and back-end video storage
- Drones can arrive on scene before responding officers, allowing command center can better identify and dispatch needed resources to the scene that plays a critical role in public safety and social security

Company review App (Spring MVC 4.3, Hibernate, Java, JavaScript, 2020)

- A server-side, data-intensive, and multitier web application build with Spring MVC and Hibernate framework that allows supervisor to post or announce company event, while employee can give feedback and ratings to the event.
- Use variety of techniques such as Hibernate Query and Criteria, Authentication Interface, Ajax, URL Rewriting with session management as well as Spring IoC container and Dependency Injection.

Path Finding Visualizer Web Application (React, JavaScript, 2020)

- Web application that animate the process of a variety of searching algorithms such as Dijkstra's algorithms, Breath-first search and A* search algorithms. More algorithms are coming soon.
- Access here: <https://caosj96-shenhua.github.io/Path-Finding-Visualizer/>

Sorting Visualizer Web Application (React, JavaScript, 2020)

- Using React and JavaScript to build a Sorting Visualizer Web to animate the sorting process including merge sort, quick sort, bubble sort and so on. Helps people to better understand the sorting algorithm.
- Access here: <https://caosj96-shenhua.github.io/Sorting-Visualizer/>