

# 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: Dec 2021*

**Champaign-Urbana, IL**

*Aug 2015 - Dec 2019*

## SKILLS

- *Programming languages:* Java, JavaScript, Python, C/C++, React, Angular, OCaml, SQL, etc
- *Technical skills:* Front-end, Back-end web development, Spring MVC, Machine Learning, Data Analysis

## EXPERIENCE

### Northeastern University

*Research Assistant*

**Boston, MA**

*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.

### ChineseAll Digital Publishing Group Co. Ltd.

*Software Engineering Intern*

**Shanghai, China**

*May 2018 – Aug 2018*

- Reorganized and analyzed big data by Python Pandas, helping the company to visualize and customize the data.
- Designed and implemented a program to increase the data sampling speed by 50%, helping the company to fully utilized for future data analysis as well as for data request from other companies.

## PROJECTS

### Portfolio website (HTML, CSS)

- A brief summary of my work and experience. Access here: <https://shijun-cao-site.herokuapp.com>

### To Do List App (JavaScript, HTML, Sass, 2020)

- A convenient web app that tracks every day to do task simply by entering task name and set due.
- Access here: <https://to-do-app-shijun-cao.herokuapp.com/>

### Path Finding Visualizer Web Application (JavaScript, React, 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 (JavaScript, React, 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/>

### Supply Chain Management Application (Java, 2020)

- Develop a Java Application that focus on the construction and operations of a digital platform in shoes manufacturing domain, severing as a communication system for specialists and administrative operational personnel. This design included system design and implementation.
- Opens the possibility for many useful uses that are critical to the safety and well-being of shoe industry, as well as effectiveness in delivering quality service, and efficiencies to ensure that the services are affordable.

### Global Warming Predicting Deep Learning Project (Python, 2020)

- Use LSTM, ARIMA model and other Artificial neural network algorithm to design a particular model to deep learn the global warming data and to predict the future temperature.
- Analyze past endanger species data with data visualization to predict the future impact of the global warming to them.

### Cushman & Wakefield Intranet Gamification for Enhancement of Employee Participation (C#, Angular, 2019):

- Use Angular to design and development an internal gamification web application for Cushman & Wakefield. Include front end User Interface portal and REST-Backend with ASP.NET Core to connect to the database with all the employee information of Cushman Wakefield.
- Use Microsoft Azure as the hosting for the gamification engine, develop a universal engine to add gamification components to internally built apps to promote employee involvement and interaction.