Charles Shi

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EDUCATION

University of Illinois at Urbana-Champaign   Expected May 2023
Bachelor of Science, Statistics and Computer Science   GPA: 3.94/4.0

- Relevant Coursework: Data Structures and Algorithms, Software Design Studio, Computer Architecture, Discrete Mathematics, Linear Algebra, Multivariable Calculus, Statistics and Probability

EXPERIENCE

AT&T — *Incoming Software Engineer Intern*   June 2021 - September 2021

- Projects, teams, and tasks will be determined at a later time.

Futurist Academy — *Software Developer Intern*   July 2020 - September 2020

- Created a full-stack application that takes in any research paper and outputs similar COVID-19 research papers using Natural Language Processing and graph databases (stored over **1.5 million** edges and nodes).
- Utilized Plotly/Dash and GSQL to develop a personalized patient dashboard with data visualizations and patient statistics.
- Implemented and used REST APIs in Python to interact with TigerGraph and enhance overall security for projects.

STEM Builders — *Computer Science and Robotics Teacher*   September 2018 - Present

- Taught programming languages (Python, Java, HTML/CSS, MIT App Inventor, Scratch) and robotics to **K-8** students.
- Designed and planned final projects that assessed the students' problem-solving skills while incorporating their interests.
- Successfully mentored more than **50** students and gained leadership experience after adapting to unforeseen circumstances.

Minnesota Mandarin Christian Church — *Software Developer*   August 2017 - March 2020

- Built a responsive website using HTML/CSS and JavaScript to help the church grow and expand its congregation.
- Maintained the website weekly and updated it when new information (bulletins, retreats, sermons) needed to be released.

PROJECTS

Pickup — *React, JavaScript, HTML/CSS, Mapbox, Firebase, APIs*   MinneHack 2021 Winner

- Collaborated with a team of developers to construct an application capable of linking people who are in need of food with restaurants that have excess food after working hours.
- Connected the React frontend with Firebase using APIs to produce synchronous updates between authenticated users.
- Placed **1st** out of more than **100** participants at the University of Minnesota's annual hackathon.

Let's Talk — *React, Node, Express, Firebase, Redis, Web Sockets*   TreeHacks 2021 Participant

- Worked with software engineers who attended Stanford University's hackathon to create a chatroom that can match users who share opposing political views in hopes of producing a middle ground.
- Leveraged Redis/Firebase to save chat logs and store user information and utilized web sockets to send messages between users.

Tumor Scanner — *Python, TensorFlow, Streamlit, Neural Network*

- Developed a Convolutional Neural Network that identifies tumors from MRI scans and built its frontend using Streamlit.
- Trained the neural network with over **7,000** images and modified it to obtain a final accuracy of **95%**.

CalcShare — *JavaScript, HTML/CSS, Kotlin, Web Sockets, APIs*

- Constructed an online calculator that allows real-time collaboration between users who are in the same room.
- Implemented a JavaScript client to communicate with servers and designed web sockets to handle the constant influx of data.

SKILLS

Languages: Python, C++, Java, HTML/CSS, JavaScript, LaTeX, R, GSQL, SQL
Frameworks/Technologies: React, Flask, Express, Node, TensorFlow, Git, TigerGraph, Firebase