


Charles Shi

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EDUCATION

University of Illinois at Urbana-Champaign

Expected May 2023

Bachelor of Science, Computer Science and Statistics

GPA: 3.95/4.0

- Relevant Coursework: Algorithms and Models of Computation, Data Structures and Algorithms, Computer Architecture, Software Design and Testing, Discrete Mathematics, Statistics and Probability

EXPERIENCE

AT&T — Software Engineer Intern

June 2021 - September 2021

- Projects, teams, and tasks will be determined at a later time.
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Futurist Academy — Software Engineer Intern

June 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 Python and GSQL to develop a personalized patient dashboard with data visualizations and patient statistics.
- Implemented and used REST APIs 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.
- Mentored over **50** students and gained valuable leadership experience after adapting to unforeseen circumstances.

PROJECTS

Pickup — React, JavaScript, Mapbox, Firebase

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.
- Placed **1st** out of more than **100** participants at the University of Minnesota's hackathon winning **\$1200** in prizes.

Let's Talk — React, Node, Express, Firebase, Redis

TreeHacks 2021 Participant

- Partnered with software engineers who attended Stanford'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 user information and utilized web sockets to send messages between users.

Prinvoice — React, JavaScript, HTML/CSS, SQL

Deta Software Contributor

- Rewrote the backend of Prinvoice, an open source invoice application, to make it compatible with Deta's database.
- Translated over **30** SQL queries into JavaScript calls to Deta and updated the internal state to account for these changes.

Tumor Scanner — Python, TensorFlow, Streamlit

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

ADDITIONAL

Languages: Python, C++, Java, HTML/CSS, JavaScript, LaTeX, R, GSQL, SQL, MATLAB

Frameworks/Technologies: React, Flask, Express, Node, TensorFlow, Streamlit, Git, TigerGraph, Firebase

Honors: Dean's List, President's Volunteering Service Award (Gold), National Merit Finalist, National AP Scholar