

CAIJUN QIN

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EDUCATION & HONORS

Aug 2019 – **UNIVERSITY OF FLORIDA** ♦ GAINESVILLE, FL
May 2022 **Major:** Computer Science, B.S. ♦ **Major GPA:** 3.97 / 4.00
Honors & Distinctions: University Scholars Program, Russell and Mary Hyatt McCaughan Scholarship
Relevant Coursework: Discrete Structures, Data Structures and Algorithms, Machine Learning, Performant Programming in Python, Competitive Programming, Principles of Programming Language

Aug 2018 – **FLORIDA STATE UNIVERSITY** ♦ TALLAHASSEE, FL
May 2019 **Major:** Computer Science, B.S. ♦ **Major GPA:** 4.00 / 4.00
Honors & Distinctions: President's List, Dean's List, Honors Program, University Freshman Scholarship
Relevant Coursework: Intro Programming I (C++), OO Programming, Linear Algebra, Calculus III

PROJECTS & RESEARCH

May 2020 – **Predictive Sampling Method for Spread Models in Networks** ♦ UF University Scholars Program
April 2021

- Primary co-author of research paper to be published April 2021
- Developing new sampling method for large networks based on probabilistic spread from single node
- Using a agent-based model programmed with Python NetworkX and Mesa libraries to evaluate accuracy

May 2020 – **Backend Engineer for OCR Note-taking Application** ♦ UF Performant Programming Course
Aug 2020

- Maintained customizable pipeline to preprocess text images with OpenCV and Pillow library tools
- Optimized parameter values for different image preprocessing functions and experimentally determined the best selection and order of functions to boost optical character recognition (OCR) accuracy

Jan 2020 – **American Sign Language Image-to-Letter Translator** ♦ UF Machine Learning Course
Apr 2020

- Collaboratively built classification system for sign language image recognition with supervised machine learning paradigm
- Engineered pipeline that preprocesses image, trains classifier, predicts letter, and evaluates accuracy

Jun 2019 – **JTreeLib Library with JavaDocs** ♦ Open-Source Project
Sept 2019

- Developed open source library to build binary tree, ternary tree, B-tree, segment tree, trie, and more
- Aims to significantly improve work efficiency for others in need of commonly used data structures

Jan 2019 – **Bipartite Matching Optimization** ♦ FSU University Honors Research
May 2019

- Applied bipartite graph theory and Hungarian Algorithm to minimize costs between two sets of data
- Innovated separate optimization algorithm that pinpoints best matchings based on any set of weighted and quantitative attributes set by user
- Designed search algorithm for matrices that selects optimal entry according to custom numerical criteria

Mar 2018 – **Solar Architect JavaScript GUI** ♦ High School CS Principles Course Final Project
Apr 2018

- Constructed architectural blueprint mobile application with toolbar and animated aesthetics
- Facilitates planners to quickly and accurately sketch designs from multiple views in perspective

AWARDS, FUNDING, & RECOGNITION

May 2020 **Russell and Mary Hyatt McCaughan Scholarship**
\$1000 ♦ University of Florida, Gainesville, FL

Feb 2020 **University Scholars Program**
\$1750 ♦ University of Florida, Gainesville, FL

May 2018 **University Freshman Scholarship**
\$1200 / Semester ♦ Florida State University, Tallahassee, FL

Mar 2019 **1st Place in Lower Division (Out of 78 Teams)**
FSU Spring Programming Competition ♦ Florida State University, Tallahassee, FL

PROFESSIONAL SKILLS

Bilingualism

Articulate communicator and writer with fluency in *English* and *Mandarin Chinese*

Frameworks and Tools

Working knowledge of *MySQL*, *MongoDB*, *SQLite*, *node.js*, and various unit testing frameworks (*CATCH*, *JUnit*, *Pytest*)

Programming Languages

Relatively ordered proficiency in *Python*, *Java*, *C++*, *C#*, *R*, *Go*, *HTML*, *CSS*, *JavaScript*