# CAIJUN QIN

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## EDUCATION & HONORS

| Aug 2019 –<br>May 2022 | **UNIVERSITY OF FLORIDA** ♦ GAINESVILLE, FL<br>**Major**: Computer Science B.S. & Minor in Statistics **Major GPA:** 3.97 / 4.00<br>**Honors & Distinctions:** University Scholars Program, Russell and Mary Hyatt McCaughan Scholarship<br>**Relevant Coursework:** DSA, Machine Learning, Performant Programming in Python, Competitive Programming, Principles of Programming Language, Data Science, Programming with Data in R, Intro to SWE |
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| Aug 2018 –<br>May 2019 | **FLORIDA STATE UNIVERSITY** ♦ TALLAHASSE, FL<br>**Major**: Computer Science B.S. **Major GPA:** 4.00 / 4.00<br>**Honors & Distinctions:** President's List, Dean's List, Honors Program, University Freshman Scholarship<br>**Relevant Coursework:** Intro Programming I (C++), OO Programming, Linear Algebra, Calculus III |

## PROJECTS & RESEARCH

| Jan 2021 –<br>Jan 2021 | **Sentinel** ♦ **SwampHacks VII Hackathon** |
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- Team won the *InfoTech Challenge* for most innovative use of a public dataset for the public good
- Constructed a CSV-to-JSON converter to facilitate importing uploaded data to *Cloud Firestore* database

| May 2020 –<br>April 2021 | **Predictive Sampling Method for Spread Models in Networks** ♦ UF University Scholars Program |
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- 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 agent-based model programmed with Python NetworkX and Mesa libraries to evaluate accuracy

| May 2020 –<br>Aug 2020 | **Backend Engineer for OCR Note-taking Application** ♦ UF Performant Programming Course |
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- 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 –<br>Apr 2020 | **American Sign Language Image-to-Letter Translator** ♦ UF Machine Learning Course |
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- Collaboratively built classification system to translate ASL hand images with supervised ML paradigm
- Engineered pipeline that preprocesses image, trains classifier, predicts letter, and evaluates accuracy

| Jun 2019 –<br>Sept 2019 | **JTreeLib Library with JavaDocs** ♦ Open-Source Project |
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- 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 –<br>May 2019 | **Bipartite Matching Optimization** ♦ FSU University Honors Research |
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- Applied bipartite graph theory and Hungarian Algorithm to minimize costs between two sets of objects
- Innovated separate optimization algorithm that pinpoints best matchings based on any set of weighted and quantitative attributes defined by the user
- Designed search algorithm for matrices that selects optimal entry according to custom numerical criteria

## AWARDS, FUNDING, & RECOGNITION

| May 2020 | **Russell and Mary Hyatt McCaughan Scholarship**<br>$1000 ♦ University of Florida, Gainesville, FL |
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| Feb 2020 | **University Scholars Program**<br>$1750 ♦ University of Florida, Gainesville, FL |
| May 2018 | **University Freshman Scholarship**<br>$1200 / Semester ♦ Florida State University, Tallahassee, FL |
| Mar 2019 | **1st Place in Lower Division (Out of 78 Teams)**<br>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*