

Caijun Qin

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Linkedin: <https://linkedin.com/in/cq-profile> ♦ **GitHub:** <https://github.com/Fennec2000GH>

EDUCATION

- Aug 2019 – May 2022 **University of Florida** ♦ Gainesville, FL, USA
Major: Computer Science B.S. & Statistics B.A.
Major GPA: 3.93 / 4.00
Distinctions: University Scholars Program, SW Engineering Club Webmaster, UF Hackathoners Treasurer
Relevant Coursework: Data Structures and Algorithms, Machine Learning, Performant Programming in Python, Competitive Programming, Principles of Programming Language, Intro to Data Science, Programming with Data in R, Intro to Software Engineering, Statistical Learning
- Aug 2018 – May 2019 **Florida State University** ♦ Tallahassee, FL, USA
Major: Computer Science B.S.
Major GPA: 4.00 / 4.00
Distinctions: University Honors Program, Treasurer of ACM Chapter
Relevant Coursework: Intro Programming I (C++), OO Programming, Linear Algebra, Calculus III

RESEARCH INTERESTS

Machine Learning, Big Data Analytics, Graph Theory, Network Algorithms, Optimization

RESEARCH EXPERIENCE

- Jun 2021 – Present **Using AI to Trace the History of Race and Inequality**
Undergraduate Research Assistant ♦ Department of Classics, College of Liberal Arts & Sciences, University of Florida
Advisor: Eleni Bozia
Engineering NLP pipeline to clean, translate, and index Latin and Greek texts for querying
Leads team of students to webscrape XML files and extract raw text sections from classical literature
Leveraging HPC from UF's HiperGator 2.0 supercomputer to processes tasks on corpora in parallel
- Jun 2021 – Aug 2021 **Research Experience for Undergraduates at UNT**
REU Recipient ♦ Department of Information Science, College of Information, University of North Texas
Advisor: Junhua Ding
First author of paper comparing traditional machine learning and deep learning algorithms on legal text classification
Experience with BERT transfer learning with Tensorflow/Keras and HuggingFace libraries
- Mar 2021 – Present **Theoretical Modeling of Dynamic Vegetation in Agricultural Terrains for Active Passive Microwave Retrieval of Soil and Crop Parameters**
Undergraduate Research Assistant ♦ Institute of Food and Agricultural Sciences, University of Florida
Advisor: Jasmeet Judge
Developing functional-structural plant model (FSPM) in Blender and SpaceClaim to simulate crops at different growth stages
- May 2020 – April 2021 **Predictive Sampling Method for Spread Models in Networks**
Undergraduate Researcher ♦ University Scholars program, University of Florida
Advisor: Peter Dobbins
Author of research paper submitted to UF's *Journal of Undergraduate Research*
Developed new sampling method for large networks based on quota sampling of high-degree nodes
Used varying statistics of samples to evaluate proposed algorithm against other sampling algorithms
- Jan 2019 – May 2019 **Cost Minimization and Optimization of Criteria-based Matchings**
Honors Credit Project (3 credits) ♦ University Honors Program, Florida State University
Advisor: Peixiang Zhao
Implemented Hungarian Algorithm in C++ to optimally choose pair from bipartite graph representing costs
Designed comparable algorithm but optimally chooses pair based on multiple positive attribute values

PROJECT EXPERIENCE

- Jan 2021 – Present **List of Hackathons**
Participant ♦ Organizer Varies
Frequently partake in open-source project competitions (hackathons) hosted by various institutions and organizations
Detailed list: <https://github.com/Fennec2000GH/Hackathon-Repository-Hub/blob/main/README.md>

May 2020 – Aug 2020	OCR Note-taking Application <i>Backend Engineer ♦ Performant Programming Course, University of Florida</i> Maintained customizable pipeline to preprocess text images with <i>OpenCV</i> and <i>Pillow</i> 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 – Apr 2020	American Sign Language Image-to-Letter Translator <i>Student / Group Member ♦ Intro to Machine Learning Course, University of Florida</i> 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

AWARDS & HONORS

May 2021	Best Use of Datastax Astra <i>RU Hacks 2021 ♦ Ryerson University, Toronto, ON, CAN</i>
Feb 2021	Best Covid-19 Hack <i>BrickHack 7 ♦ Rochester Institute of Technology, Rochester, NY, USA</i>
Feb 2021	4th Place <i>EconHacks 2021 ♦ Virtual Hackathon</i>
Jan 2021	InfoTech Challenge for most innovative use of a public dataset for the public good <i>SwampHacks VII ♦ University of Florida, Gainesville, FL, USA</i>
Mar 2019	1st Place in Lower Division <i>FSU Spring 2019 Programming Competition ♦ Florida State University, Tallahassee, FL, USA</i>
Jan 2019	University Scholars Program <i>Lateral Admission into Honors Program ♦ Florida State University, Tallahassee, FL, USA</i>

FUNDING & SCHOLARSHIPS

Jun 2021 – Aug 2021	NSF REU: College of Information at UNT \$7000 ♦ <i>University of North Texas, Denton, TX, USA</i>
Mar 2021	Gartner Group Information Technology Fund \$1000 ♦ <i>University of Florida, Gainesville, FL, USA</i>
May 2020	Russell and Mary Hyatt McCaughan Scholarship \$1000 ♦ <i>University of Florida, Gainesville, FL, USA</i>
Feb 2020	University Scholars Program \$1750 ♦ <i>University of Florida, Gainesville, FL, USA</i>
May 2018	University Freshman Scholarship \$1200 / Semester ♦ <i>Florida State University, Tallahassee, FL, USA</i>

QUALIFICATIONS

Apr 2021	MATLAB Machine Learning Onramp
Apr 2021	MATLAB Onramp
Jul 2020	M001: MongoDB Basics
May 2015	Microsoft Office Specialist: Word 2013
May 2015	Microsoft Office Specialist: Excel 2013
May 2015	Microsoft Office Specialist: PowerPoint 2013

PROFESSIONAL SKILLS

Languages	English, Mandarin Chinese
Programming Languages	Python, C++, Java, Julia, R, Rust, C#, MATLAB, Solidity, Go, JavaScript
Markup Languages	HTML, CSS, XML, YAML
Databases	MySQL, SQLite, CockroachDB, MongoDB, Cloud Firestore
Frameworks & Tools	Apache Spark, Node.js, React, Angular