Caijun Qin

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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
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 – 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
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 preprocessing pipeline to clean, translate, and index Latin and Greek words across archived documents Leveraging HPC from UF's HiperGator 2.0 supercomputer to processes tasks on corpora in parallel
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**
	Backend Engineer ♦ Performant Programming Course, University of Florida
	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 – Apr 2020	**American Sign Language Image-to-Letter Translator**
	Student / Group Member ♦ Intro to Machine Learning Course, University of Florida
	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**
	RU Hacks 2021 ♦ Ryerson University, Toronto, ON, CAN
Feb 2021	**Best Covid-19 Hack**
	BrickHack 7 ♦ Rochester Institute of Technology, Rochester, NY, USA
Feb 2021	**4th Place**
	EconHacks 2021♦ Virtual Hackathon
Jan 2021	**InfoTech Challenge** for most innovative use of a public dataset for the public good
	SwampHacks VII ♦ University of Florida, Gainesville, FL, USA
Mar 2019	**1st Place in Lower Division**
	FSU Spring 2019 Programming Competition ♦ Florida State University, Tallahassee, FL, USA
Jan 2019	**University Scholars Program**
	Lateral Admission into Honors Program ♦ Florida State University, Tallahassee, FL, USA

FUNDING & SCHOLARSHIPS

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

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	Node.js, React, JQuery, Bootstrap