Qi Zeng

Berkeley, California qi_zeng@berkeley.edu Q1Zeng.github.io

Education

Master of Engineering in Computer Science Aug. 2023 - May 2024
University of California, Berkeley Berkeley, California, U.S.
- Concentration: Data Science and Systems

Bachelor of Science in Mathematics and Computer Science Aug. 2020 - May 2023
Georgia Institute of Technology Atlanta, Georgia, U.S.
- GPA: 3.88/4.0
- Graduated with highest honors
- Computer Science Concentration: Intelligence & People
- Mathematics Concentration: Statistics & Probability

Undergraduate Coursework in Mathematics Aug. 2019 - Aug. 2020
University of Florida Gainesville, Florida, U.S.
- GPA 3.86/4.0
- Transferred to Georgia Institute of Technology in August 2020

Research

Research on Reinforcement Learning on DNA Sequences Sep. 2023 - Present
University of California, Berkeley Berkeley, California, U.S.
- Working with on a research project of using language models with reinforcement learning algorithms to decode information in DNA sequence mutations. Joint work with Jianan Li, a PhD student in Prof. Yun S. Song's lab.

Competitive Physics Informed Neural Network Sep. 2021 - Jan. 2023
Georgia Institute of Technology Atlanta, Georgia, U.S.
- Implemented a new network structure (with PyTorch and TensorFlow) to incorporate a Generator-Discriminator framework into **P**hysics **I**nformed **N**eural **N**etworks to solve partial differential equations for higher accuracy. Mentored by Prof. Florian Schäfer and Prof. Spencer Bryngelson.
- First-author of the paper titled *Competitive Physics Informed Networks*, accepted for a poster presentation at the **I**nternational **C**onference on **L**earning **R**epresentations 2023.
- Delivered an oral presentation at 2022 Georgia Scientific Computing Symposium.
- Delivered an oral presentation at 16th Annual Spring Undergraduate Research Symposium at Georgia Tech.
- Presented a poster at the International Conference on Learning Representations 2022 workshop on Gamification and Multiagent Solution.

Work Experiences

Application Development Intern May. 2022 - Aug. 2022
ADP, LLC. Alpharetta, Georgia, U.S.
- Assisted full-time backend developers to decouple previously dependent projects, optimized the internal system and resulting in faster compilation and increased stability for development.

- Developed multiple Jersey RESTful web service APIs in Java and integrated the APIs into the existing code base.

Student Assistant   Oct. 2021 - May 2023
Georgia Institute of Technology   Atlanta, Georgia, U.S.
- Assisted Dr. Gregory Mayer with weekly office hours, evaluated over 600+ students' performance and answered students' questions in the Multivariable Calculus class.
- Assisted Prof. Anton Leykin to evaluate 100+ students' performance in the Second Course to Linear Algebra class.
- Assisted James Anderson to evaluate 80+ students' performance in the Applied Combinatorics class.

Projects and Other Experiences

Capstone Project: Deep Learning on Time Series   Sep. 2023 - Present
University of California, Berkeley   Berkeley, California, U.S.
- Working on a Capstone project of applying deep learning methods on time series. Mentored by Yunkai Zhang, a PhD student in Prof. Zeyu Zheng's lab.

Open Source Project Contribution: ERDDAP   Jun. 2021 - Aug. 2021
Google and Integrated Ocean Observing System   Remote
- Worked with the Integrated Ocean Observing System under **N**ational **O**ceanic and **A**tmospheric **A**dministration to develop a Java auto translation tool to translate ERDDAP (an opensource data server application used by oceanographic communities) upon new releases. Supported by Google Summer of Code Progam.
- Enhanced enhance data accessibility for oceanographic science communities.
- Detailed description at https://summerofcode.withgoogle.com/projects/#5625952861683712.

Volunteer: Learning Assistant   Jan. 2020 - May 2020
University of Florida   Gainesville, Florida, U.S.
- Volunteered to assisted Dr. Stephen Adams in the Calculus I lecutres.
- Supervised and mentored students to improve their understanding on calculus concepts.

Publication

Zeng, Q., Kothari, Y., Bryngelson, S. H., & Schäfer, F. (2022). Competitive physics informed networks. 11th International Conference on Learning Representations.

Awards & Honors

Outstanding Undergraduate Researcher Award ($1000)   Spring 2023
College of Computing, Georgia Institute of Technology

Faculty Honors   Spring 2021, Spring 2022, Fall 2022, Spring 2023
Georgia Institute of Technology

Dean's List   Fall 2020, Fall 2021
Georgia Institute of Technology

President's Honor Roll   Fall 2019, Spring 2020
University of Florida

Skills

Technical Skills: Python, Java, SQL, C/C++, Tableau, Machine Learning, Data Analysis
Languages Spoken: English (Fluent), Chinese (Native Speaker)