

Pranav Rajan

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in <https://www.linkedin.com/in/pranavrajan/> 🌐 <https://github.com/mozartfish>

Education

B.S. Computer Science, *University of Utah*

GPA: 3.7/4.0

MS Computing, *University of Utah*

Human-Centered Computing Track

GPA: 3.8/4.0

Skills + Coursework

Languages: JavaScript/Typescript, Golang, C++, HTML, CSS, Python, R, SQL

Libraries/Frameworks: D3, Git, Vue, Svelte

Relevant Coursework: Distributed Systems*, Operating Systems*, Visualization(Information, Scientific*), HCI*, Algorithms*

* - Graduate class

Experience

Graduate Teaching Assistant (CS 1420, 6017, 5630, 6630), *University of Utah (School of Computing)*

May 2021 – present

- Mentored 700 students and taught weekly hourly labs of 30-40 students in CS 1420: Accelerated Introduction to Computer Science. Grade assignments, administer exams, and answer student questions about object oriented programming, Java and problem decomposition
- Mentored 125 students, taught weekly hourly labs and advised student projects in CS 5630/6630 Visualization for Data Science (senior undergrad/grad class). Grade assignments, write assignments and labs, and answer student questions about D3 and debugging
- Mentored 40 students, held office hours and advised non-traditional computer programming students in CS 6017: Graduate Data Visualization and Big Data. Grade assignments, answer student questions about D3, SQL, quadtrees, D, C++, and databases

Software Engineering Intern, *Rocket EMS*

May 2022 – Aug 2022

- Removed stale data entries and refactored SQL queries to take advantage of table relationships, indexes and stored procedures resulting in a 3x performance speedup gathering 5 years of historical data for production analysis
- Created extensive documentation for how to time line procedures in the company databases to help software development team and management identify bottlenecks in production

Software Engineer, *University of Utah Civil and Environmental Engineering (Transportation Group)*

Oct 2021 – Dec 2021

- Worked on developing next-generation software tools for studying environmental impact and electric transit in Salt Lake City and the United States as part of a collaboration between the Utah SCI Institute, NSF, Utah Transportation Group
- Built a data processing tool for combining custom large raw text files and ArcGIS files into JSON for visualization with D3 using Python and JavaScript still in use by the Transportation Group
- Created interactive visualizations, dashboard and interactive map with JavaScript, Leaflet, and D3

Research Assistant,

Jun 2020 – Sep 2021

University of Utah Scientific Computing and Imaging Institute (Visualization Design Lab) 🌐

- Worked on MultiAggr (published in IEEE VIS 2021) and MultiMatrix for visualizing multivariate networks as part of the NSF MultiNet Project
- Worked on refactoring MultiMatrix for interactive visualization and official release in 2023
- Wrote proposal and secured \$8,000 NSF REU grant as part of NSF OAC 1835904 for research and development of MultiAggr and my contribution to MultiMatrix

Software Engineering Intern, *Honeywell Inc*

May 2019 – Jul 2019

- Worked on benchmarking and testing neural networks with different activation functions
- Wrote multiple MNIST and stock prediction programs using Quandl API to visualize efficiency and accuracy of the different neural networks