Benjamin E. Jordan

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LinkedIn| Portfolio Website | GitHub

Education

Cornell University [Expected Dec 2023]
M.Eng. in Computer Science - Specialization in Machine Learning

Rochester Institute of Technology [Graduated Dec 2022]
B.S. in Computer Science - Minor in Music and Technology

Skills

Programming: Python, C/C++, C#, Java, Javascript, NumPy, PyTorch, Angular, SQL
Other Skills: Git, Linux, Unit Testing, Agile Development, LaTeX

Experience

Machine Learning Intern **[KLA, May 2023 - Present]**
- Researched and implemented ML solutions to improve automatic defect detection in the Zeta
- Used transfer learning with vision transformers to improve outdated feature extraction algos
- Separated binary (whether a defect exists) from multiclass (what kind of defect) tasks to improve prediction accuracy and interpretability
- Worked with and processed raw image data from the Zeta

Research Software Developer - Link to Prototype **[RIT, Aug 2022 - Jan 2023]**
- Hired part-time by faculty to develop software for spatial audio research during the semester
- Independently created a program that collects data on how users interpret spatial audio
- Technologies used include Three.js, Angular, and Typescript

Software Engineering Intern **[Carestream, May 2022 - Aug 2022]**
- Developed and maintained C# back-end functionality in Carestream's ImageView X-Ray software
- Solved issues allowing users to take long-length x-rays with incorrect settings

Research Software Developer - Link to Website **[RIT, June 2020 - Aug 2021]**
- Independently designed and implemented data collection software for a speech perception and cochlear implant research project with RIT and UIowa faculty
- Created 8 listening test modules using Javascript and the Web Audio API
- Participated in weekly team meetings where software progress was presented

Coursework

Computer Architecture, Algorithms, Programming Languages, Operating Systems, Cryptography, Parallel Computing, Distributed Systems, Networking, Machine Learning, Reinforcement Learning, Computer Vision, Graph Theory, NLP, Large Scale Machine Learning

Activities

RIT Varsity Track and Field (15-20 hrs / week commitment) [March 2019 - Dec 2022]
RIT AI Club Member [September 2022 - Dec 2022]

Awards

RIT Presidential Merit Scholarship
Liberty League All-Academic Team

Projects

DSLabs
- Created a sharded key-value storage system using the DSLabs Java framework
- Implemented Paxos for replica group consensus, 2PC to achieve atomic commit for distributed transactions, and dynamic load balancing of shards to handle reconfiguration

Graph Neural Network Research Project
- Designed, implemented, presented, and reported an experiment on PyTorch GraphSAGE model
- Proposed that using mean-pooling aggregation for the first layer of our model would improve model performance vs. using max-pooling for all layers

EQ Audio Effect
- Wrote a four filter parametric equalizer plugin using the JUCE C++ framework
- Successfully used the EQ inside personal music making software