

Aneesh Maganti

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EDUCATION

New York University, Tandon School of Engineering, Brooklyn, NY May 2024
Bachelor of Science, Computer Science GPA: **3.71**
Relevant Courses: Algorithmic Machine Learning, Databases, Linear Algebra, Algorithms, Operating Systems

SKILLS

Languages C++, Python, Javascript, C#, Java, Bash,
Technologies SDL, Next.js, React, Node, PostgreSQL, Sklearn, DynamoDB, Docker, Windows, Linux

EXPERIENCE

MarketFusion, Los Altos, CA, *Software Engineering Intern* July 2022 - Sep 2022
• Developed client-side React.js web application registration and shopping pages for online food delivery service
• Facilitated user account creation by sending server requests to internal MySQL database via the Axios library
• Revamped login authentication by implementing 4 unique character password checks and a length requirement of 8-20 characters client-side via regular expressions and server-side to aid the security of the website

Corelink High-Speed Research Network, Brooklyn, NY, *Academic Research Intern* Sep 2021 - May 2022
• Implemented a C++ UDP network packet splitter to enable researchers to bypass Corelink's MTU limit from 20,000 to 64,000 bytes, increasing maximum throughput by 220%
• Guided 3 students as a part of my team, assisting them with their project design and implementation
• Scripted bash memory tests to determine the effectiveness of RDMA (Remote Direct Memory Access)

Monarc, Dallas, TX, *Software Engineering Intern* Jun 2021 - Aug 2021
• Developed UWP desktop application pages using MVVM (Model-View View-Model) principles to manipulate a robotic football quarterback to throw balls at 5 placements and distances up to 100 yards
• Devised error checks and boot logging to enable remote debugging, improving the stability of the machine

PROJECTS

Cost Matrix Testing on Matrix Rescaling Optimal Transport Algorithms Sep 2022 - Dec 2022
• Wrote research paper *Application of Gaussian and Euclidean Cost Matrices to Matrix Rescaling Optimal Transport Algorithms* under Professor Christopher Musco to analyze different matrix rescaling algorithms
• Implemented large test suite with varying cost matrices, datasets, and matrix scaling algorithms including two newly written greenkhorn variations with alternate row selection schemes using the Python OT library
• Determined row selection in Greenkhorn was not relevant to the runtime, showing pathway for further research

Chip8 Interpreter/Emulator August 2022
• Designed C++ interpreter for the Chip8 platform by emulating all 35 standard opcodes and its specifications (registers, memory, timers) after disassembling program binary data, allowing programs to run on an x86 platform
• Employed SDL graphics library to write graphics renderer using SDL textures and handle user input

Alzheimer MRI Detection May 2022
• Developed classification machine learning algorithm to sort preprocessed set of Alzheimer MRI images
• Tested using Python Sklearn library with three models - a logistic regression, support vector machine and convolutional neural network - with varying levels of regularization to determine which had the greatest accuracy

ACTIVITIES

BUGS Open Source Club (President): Coordinate student outreach, events and speakers, workshops, and meetings with other club board members and other tech clubs at NYU
Rock Climbing Club (Member): Partake in weekly climbs and meetups for fun and exercise