Jarron A. Douglas

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Education /Activities

THE COLLEGE OF NEW JERSEY — *Ewing, NJ*
- Bachelor of Science in Computer Science — *May 2024*

THE COLLEGE OF NEW JERSEY (Extra Curricular)
- Varsity Football | N.E.S.B.E. | P.M.P. — *Aug 2020-Present*

Academic/Personal Projects

- **(EventMatch Algorithm):** Developed a Ruby application to revolutionize event scheduling in educational settings, employing algorithms to match students with events based on their interests. The application parses student preferences and event details from CSV files, facilitating personalized engagement. This innovation showcases my programming expertise and a commitment to enhancing educational experiences through technology.
- **(Security Monitoring System):** Developed an advanced security application in Python using OpenCV capable of detecting faces and bodies in real-time through camera feeds. Implemented Haar Cascade classifiers for accurate and efficient recognition of human features, enhancing the system's detection capabilities. Programmed the system to initiate recording g upon detection, capturing footage in MP4 format, ensuring high-quality video output for security analysis. Designed an automated recording mechanism that continues for a specified duration post-detection, enhancing the capture of relevant incidents.
- **(Core Computer Architecture Implementation):** Implemented core components of a basic computer system with a team of three, including the ALU, RAM, general-purpose registers, flip-flops, and more, integrating both busy wait and interrupt-driven I/O. Utilized x86 assembly code and LogicWorks for system creation. My individual contributions encompassed the development of control logic, flip-flops, timing signals, and the sequence counter. as well as all of the control logic needed throughout the machine
- **(Assembly Burger Shop):** Leveraged Manos x86 assembly language to create a burger shop simulation program, adeptly managing inventory, orders, and sales. Utilizes interrupts for burger assembly processes and auto-closes when ingredients deplete, also prompting for restocking. This ensures a seamless operational flow by mimicking real-life supply management.
- **(Finance Tracker):** Practiced full-stack development through the integration of the Plaid API with Node.js for backend processes and React for the frontend interface. I developed a personal finance web application that meticulously tracks bank account balances and transactions, aggregating all data for historical reference and analysis. This project serves as a digital ledger, offering a comprehensive view of my spending habits for enhanced financial management.
- **(RoJ Project):** Designed and implemented the 'Statistics' module for the AMSTR (ACCR System Management Tracker),enabling the Atlantic Center for Capital Representation to analyze and visualize case work and financial contributions efficiently. This Ruby on Rails module automates the tracking of worklog entries, calculates financial metrics, and supports dynamic data visualization through pie charts, enhancing administrative and strategic planning capabilities. My contribution supports ACCR's mission to combat excessive punishments by providing a clear, real-time overview of efforts and outcomes in legal representation and advocacy.

Employment

Target Fulfilment | ***Walmart*** Electronics / Cart Attendant | ***FedEx Warehouse*** Package Handler | ***Regal*** Floor Usher

Technical Skills: Node.js|React|Plaid API|Java|C|C++|Assembly x86|HTML|Rust|SPARK Pro|Kali|Linux|Ada Pro|Infer|Clang and GCC analyzers|Valgrind|Ubuntu|Windows|Haskell|Scala|Clojure|Git|SQL