Jonathan McFee

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Education

University of Michigan, *College of Engineering*   **Ann Arbor, MI**
Computer Science, *Bachelor's of Science*   *Expected:* 05/25
- **GPA: 3.7/4.0**
- *Course Highlights*: Operating Systems (upcoming), Computer Security (upcoming), Data Structures and Algorithms, Computer Organization, Foundations of Computer Science, Discrete Mathematics
- *Awards/Honors*: Dean's List Fall '21, Winter '22, Fall '22, Winter '23; University Honors Fall '21, Winter '22, Winter '23

Professional Experience

Hatching Sparrow CRM   **Remote**
Backend Software Developer Intern   06/23-09/23
- Implemented backend for a customer relationship management system with Amazon Web Services DynamoDB
- Designed and optimized data structures and queries to enhance operational efficiency within database infrastructure
- Coded secure HTTPS routes and APIs using Node.js and Express.js, driving development of robust backend solutions

GHS Corporation   **Battle Creek, MI**
Fullstack Software Developer   06/23-08/23
- Designed a Microsoft SQL Server database for employee management and payment software, managing 30+ employees
- Compiled tension data from 500+ products and utilized HTML, CSS, and JavaScript to create guitar string tension calculator
- Performed equipment maintenance and upgrades on over 40 specialized machines for guitar string production

Projects

Social Media Application   Current
- Drafted an intuitive UI leveraging React Native, enhancing overall user experience and enabling fast navigation of features
- Employed DynamoDB database to store information, planning to use S3 to store images and Cloudfront as a distributed caching layer.

Pipelined CPU Simulation   11/23
- Demonstrated strong understanding of computer architecture by developing pipelined processor simulation in C
- Constructed using 32-bit simplified ARM architecture with support for R-Type, I-Type, O-Type and J-Type instructions
- Implemented detect-and-stall and data forwarding for data hazards and speculate-and-squash branch-not-taken for branches

Stock Price/Tweet Frequency   04/23
- Utilized Twitter and YFinance API to identify correlation between tweet frequency of Netflix's top 10 shows and stock price
- Created an SQL Database to store information gathered and analyzed data using MatPlotLib

SQL Database   04/23
- Researched efficient heuristics and optimal branch-and-bound algorithm for TSP, then coded using C++
- Applied Prim's Algorithm to calculate bound approximation and arbitrary insertion heuristic for faster approximation

Extracurriculars

Reach Consulting Group   **Ann Arbor, MI**
Project Manager   10/22-Present
- Selected to Fall '22 consultant class from an applicant pool of over 100 University of Michigan students
- Acted as a pivotal link between team and client organization, ensuring effective communication and project alignment
- Collaborated with team to develop high-end user interface/user experience, data analytics, and digital strategy solutions

Delta Tau Delta Fraternity   **Ann Arbor, MI**
Director of Community Service   01/22-05/23
- Coordinated community service events between charity organizations and members of the fraternity
- Developed compelling incentives to increase member involvement in community service initiatives

Skills

Programming Languages: C/C++, Python, JavaScript, SQL, HTML, CSS, MATLAB, XML
Technologies: Git, Linux, Visual Studio Code, Amazon Web Services, Postman, DynamoDB, MS SQL Server, NoSQL Workbench, Node.js