Ethan C. Morgan

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EDUCATION

University of Michigan, Ann Arbor, MI
Bachelor of Science in Computer Science - GPA: N/A COVID   *Dec. 2022*
- Coursework: Web Development, Computer Networks, Computer Security, Computer Organization, User Interface

Michigan Technological University, Houghton, MI
Bachelor of Science in Computer Science - GPA: 3.86   *Sept. 2018 - Dec. 2019*
- Coursework: Data Structures and Algorithms, Discrete Structures, International Economics, Linear Algebra

PROJECT EXPERIENCE

Ask485 Search Engine - Python, Flask   *May 2021*
- Built a scalable search engine in Python utilizing PageRank and TF-IDF concepts
- Designed HTML search interface to display search query results from REST API Python backend running on Flask
- Utilized MapReduce to efficiently parse and index over 30 MB of Wikipedia pages
- Implemented a REST API to handle user search queries using Flask

MapReduce Server - Python   *Apr. 2021*
- Developed a MapReduce server in Python which executes user-submitted MapReduce jobs with multi-server capability
- Implemented multi-server functionality using multi-threaded TCP and UDP sockets for master-worker communication
- Added fault tolerance functionality to create program resiliency in case a worker dies

Desktop Instagram Clone - Python, React JS, JavaScript, SQLite, Flask   *Feb. - Mar. 2021*
- Designed and wrote REST API backend using Python and Flask to pull data from SQLite Database for page content
- Protected stored passwords utilizing K-anonymity and SALT encryption
- Enhanced user experience by creating infinity scrolling, likes, browser history, and commenting features in React JS

Neural Network Optical Character Recognition (OCR) - Java   *Jun. 2018*
- Created a neural network Java application that trained itself to identify handwritten numeric numbers
- Implemented ability to train itself on pictures of handwritten numbers or in a real time drawing interface

EXPERIENCE

Amazon, Seattle WA
Software Development Engineer Intern   *May. - Aug. 2022*
- Yet to begin

Ford Motor Company, Dearborn MI
Global Data, Analytics, and Insights (GDI&A) Summer Intern working in The Democratization Team   *Jun. – Aug. 2020*
- Decreased server wait times by 18% by designing and implementing a Schedule Optimizer to recommend the best times for new workflows
- Decreased overall server workflow errors by 11% by creating a program to notify developers of real-time server crashes on their workflows
- Increased overall server utilization by 9% by implementing workflow to notify server managers and developers when wait times were too long
- Collaborated with Alteryx and Server team on scalability of the Schedule Optimizer, for code efficiency across servers

Software Engineering Intern contracted by Ciber Global   *May – Jul. 2019*
- Automated 100+ hours of human resources by automating the patching and updating of over 700+ plant floor computers by writing PowerShell scripts
- Created detailed inventory reports for 9 Manufacturing Plants by implementing Powershell scripts to collect computer configurations
- Coordinated with Plant Management for best times to update 24/7 production lines in 9 different plants

SKILLS AND INTERESTS

Computer Languages: Java (advanced), C++ (adv.), Python (adv.), C (intermediate), Swift (novice), SQL (nov.), JS (nov.)
Platforms: Windows, Linux/Unix, OS X