

# Joshua Masters

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## SUMMARY

Enthusiastic Computer Science graduate with hands-on experience in full-stack development and machine learning. Currently applying skills in freelance web design projects, eager to tackle challenging software development problems in a dynamic and collaborative environment.

## EDUCATION

University of Dayton  
Bachelor of Science | GPA: **3.57** / 4.0  
• Concentration: Artificial Intelligence/Data Science

Dayton, OH  
Aug. 2020 - May 2024

## SKILLS

Programming Languages: Java | Python | C# | JavaScript | C++ | SQL  
Web Development: HTML/CSS | React.js | Express.js | Socket.IO | Node.js | MongoDB | Docker | Heroku | Figma | Spring  
Software Project Management: Agile | Scrum | Jira | Git | GitHub | Sprint Planning  
Core Knowledge Areas: Web Design | Data Structures/Algorithms | Machine Learning | Data Science | AI/LLMs | APIs | Microservices

## EXPERIENCE

Ohio Department of Transportation  
College Intern

Columbus, OH  
July 2023 - Aug. 2024

- Provided technical support, resolving over 200 user inquiries for the Civil Rights & Labor Construction Contracting System.
- Improved data accessibility by leveraging SQL Server Management Studio for efficient querying and data extraction.
- Enhanced system documentation, ensuring accuracy and clarity for users, contributing to a smoother user experience.
- Proposed and initiated a research project to automate Payment Affidavit processing, aiming to increase efficiency and reduce manual effort.

Kenston Technology Department  
Student Technology Summer Intern

Bainbridge, OH  
May 2016 - Aug. 2020

- Provided on-site technical support, efficiently resolving an average of 15 hardware/software issues per week.
- Implemented and maintained an inventory management system for tracking technology assets, resulting in a 20% reduction in equipment loss.
- Led a team of 5 student technicians, fostering collaboration and ensuring timely issue resolution.

## PROJECTS

### Financial Exchange Application

Dr. Nicholas Stiffler (Capstone 2)  
Jan. 2024 - Apr. 2024

Collaboratively developed an event-driven, microservice-based financial exchange application to ensure reliable client transactions and support market open/close cycles.

- Built a dynamic frontend using React and a robust backend with Spring Boot.
- Leveraged Kafka for high-throughput data streaming and MongoDB for efficient, scalable storage.
- Utilized Docker containerization for streamlined deployment and management.
- Fostered collaboration and continuous improvement through Agile practices (weekly Scrum meetings, bi-weekly sub-team syncs, and Sprint Retros).

### Messenger Web Application

Dr. Nicholas Stiffler (Capstone 1)  
Sept. 2023 - Dec. 2023

Designed and developed a real-time messenger application for seamless communication.

- Built a scalable messaging backend capable of handling instantaneous communication using Node.js, Express, and Socket.IO.
- Utilized MongoDB for efficient data storage and deployed the application on Heroku.
- Conducted thorough testing to ensure immediate message delivery and a smooth user experience.
- Employed Agile/Scrum methodologies, Git for version control, and Jira for project management to facilitate effective collaboration.

### Detecting Fake News with ML

Dr. Bayley King (Data Science)  
July 2023 - Aug. 2024

Developed a machine learning model to accurately classify fake news articles.

- Built and trained a TensorFlow neural network, achieving 70% accuracy in identifying fake news.
- Preprocessed and analyzed a Kaggle dataset using NLP techniques (tokenization, lemmatization, stop word removal).
- Evaluated model performance using key metrics and a confusion matrix to identify areas for improvement.
- Utilized data visualization to gain insights into data distribution, informing feature engineering and model interpretation.