

Jonathan Morse

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Education

Master of Science, Computer Science

Louisiana State University

- Accelerated Masters Program
- GPA: 4.1

May 2024 – May 2025

Baton Rouge, Louisiana

Bachelor of Science, Computer Science

Louisiana State University

August 2021 – May 2024

Baton Rouge, Louisiana

Experience

Research Engineer

Ochsner Health

January 2024 – Present

New Orleans, Louisiana

- Led a multidisciplinary healthcare and data science team, managing sprints and ensuring timely delivery of projects, resulting in a 15% increase in team efficiency
- Spearheaded the definition and tracking of KPIs, leading to a 20% improvement in project success rates
- Conducted in-depth data analysis to refine the CNN model, boosting segmentation accuracy of nasal landmarks by 70%
- Published research findings in the "International Forum of Allergy & Rhinology," highlighting the project's significant impact on improving diagnostic accuracy

Lead Software Engineer

National Science Foundation, LSU College of Engineering

August 2023 – Present

Baton Rouge, Louisiana

- Led \$120,000 NSF-funded VR project for extraterrestrial construction, coordinating multidisciplinary teams
- Engineered VR environments using Unreal Engine 5 and Meta Quest, integrating 100+ participant case studies
- Implemented custom data collection framework, gathering over 1,000,000 data points on user input and interactions
- Optimized VR training modules based on collected data, enhancing user experience and learning outcomes

Research Assistant

University of Cambridge Dept. of Civil Engineering, LSU College Engineering

May 2022 – August 2023

Baton Rouge, Louisiana

- Improved material behavior understanding by 30% through analysis of 50+ samples' gauge factors and stress responses
- Engineered features for 500 data entries, boosting model performance by 20%
- Designed and deployed a network of 10 Arduino-based sensors to monitor concrete samples, collecting thousands of data points via LoRa, leading to a 40% increase in data resolution

Project Intern

National Aeronautics and Space Administration (NASA), Sev1Tech, LSU DMAE

May 2023 – August 2023

Baton Rouge, Louisiana

- Developed a control flow utilizing the HoloLens to control the uFactory xArm within the digital twin project
- Integrated the robotic arm control into the digital twin environment of the Michoud Facility

Skills

Languages & Frameworks: Python, C++, JavaScript, React.js, Node.js, R

Data Science & ML: Keras, TensorFlow, PyTorch, Tableau, Scikit-learn, Pandas, NumPy, SciKit-Learn

Software Engineering: Git, Docker, Kubernetes, RESTful APIs, CI/CD

XR Development: Unreal Engine, Meta Quest SDK, OpenXR, MetaXR, Unity

Embedded Systems & IoT: Arduino, LoRa, Sensor Networks

Databases: SQL, MongoDB, MySQL

Cloud & DevOps: AWS, Azure, Apache Spark, Hadoop, HDFS

Apple Technologies: Swift, Xcode

Project Management: Agile, Scrum, Jira, Team Leadership

Publications

Bidwell J, Gyawali D, **Morse J**, Ganeshan V, Nguyen T, McCoul ED. (2024). Real-time augmentation of diagnostic nasal endoscopy video using AI-enabled edge computing. *International Forum of Allergy & Rhinology*. **11111**. doi:10.1002/alr.23458

Ganeshan V, Bidwell J, Gyawali D, et al. (2024). Enhancing nasal endoscopy: Classification, detection, and segmentation of anatomic landmarks using a convolutional neural network. *International Forum of Allergy & Rhinology*, **14**, 1521–1524. doi:10.1002/alr.23384