Wyatt Mayor

309-297-9051 | wpmayor2@illinois.edu | linkedin.com/in/wyattmayor | github.com/WyattMayor | wyattmayor.github.io/

EDUCATION

University of Illinois Urbana-Champaign — Aug. 2023 – Present
Master of Computer Science in Computer Science — *GPA 3.88/4.00*

Monmouth College — Aug. 2021 – May. 2023
Bachelor of Arts in Computer Science — *GPA 3.85/4.00*

PROFESSIONAL EXPERIENCE

CAT Vehicle REU — June 2022 – Aug. 2022
University of Arizona — *Tuscon, AZ*

- Integrated and tested advanced Deep Neural Networks for shadow detection on road signs, significantly enhancing visibility and reliability for autonomous vehicle systems.
- Innovated a Generative Adversarial Neural Network approach to effectively remove shadows from images, markedly improving classification accuracy for autonomous driving applications.
- Authored a detailed, well-documented research paper, effectively communicating complex machine learning concepts and the project's breakthroughs to a broad audience.

PROJECTS

Object Detection on Fisheye Security Cameras Using Oriented Bounding Boxes.

- Engineered a PyTorch-based object detection system tailored for fisheye security camera datasets, achieving precise oriented bounding box predictions and enhancing surveillance accuracy
- Developed a customized RetinaNet architecture and advanced loss functions to address the unique challenges of fisheye image distortion, demonstrating expertise in neural network design and implementation
- Created comprehensive visualization techniques and utility functions for data preprocessing and augmentation, significantly improving model interpretability and performance analysis

Real-Time Depth Prediction

- Implemented FastDepth architecture for real-time depth prediction, achieving 88% accuracy on the NYU dataset.
- Integrated a combination loss function (MSE, gradient edge loss, and SSIM) to enhance model convergence
- Utilized a MobileNet backbone with encoder-decoder scheme for efficient depth feature extraction and improved spatial awareness

Modeling The Connection of Products, Demographics, and Social Media

- Pioneered a Graph of Graphs framework to analyze connections between products, demographics, and social media, providing insights for optimal advertising
- Created analytical tools to visualize and interpret complex data, driving informed advertising decisions

RELEVANT COURSEWORK

Machine Learning Foundation: Machine Learning, Artificial Intelligence, Data Mining Principles
Machine Learning Application: Deep Learning for Computer Vision, Machine Learning for Compilers and Architectures, Mobile Robotics, Natural Language Processing, Deep Learning with Graphs
Other Relevant Courses: Software Engineering I, The Art of Web Programming, Databases

AWARDS AND ACHIEVEMENTS

Computer Science Award - Senior Project — Monmouth College, May 2023

- Honors exceptional achievement in a capstone project, recognizing innovation and excellence

Computer Science Award - Introductory Sequence — Monmouth College, May 2022

- Honors a student with exceptional performance in foundational computer science courses

TECHNICAL SKILLS

Languages: Python, C/C++, Java, SQL, JavaScript, HTML/CSS
Machine Learning Frameworks: PyTorch, TensorFlow, Keras, Scikit-learn
Developer Tools: Git, Docker, TravisCI, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ
Libraries: Seaborn, Gensim, Pandas, NumPy, Matplotlib