Wyatt Mayor

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EDUCATION

University of Illinois, Urbana Champaign, IL

Master of Computer Science in Computer Science (MCS) | GPA: N/A

Monmouth College, Monmouth, IL

Bachelor of Arts in Computer Science | GPA: 3.85/4.00

Carl Sandburg College, Galesburg, IL

Associates of Arts | GPA: 3.62/4.00

May 2023

December 2024

May 2021

EXPERIENCE

CAT Vehicle REU, University of Arizona, Tucson, AZ

(June 2022 - August 2022)

- Worked with state-of-the-art Shadow Detection Deep Neural Networks to detect shadows on road signs
- Developed and implemented a Generative Adversarial Neural Network to remove shadows from images before classification
- Learned how to produce a concise and well-documented research paper to explain what the research entailed

PUBLICATIONS

Wang, A., Mayor, W., Smith, R., Nookula, G., & Ditzler, G. (2022). Shadows Aren't So Dangerous After All: A Fast and Robust Defense Against Shadow-Based Adversarial Attacks. arXiv preprint arXiv:2208.09285

ACADEMIC PROJECTS

The Scot Bot – Senior Project, Monmouth College, Monmouth, IL

- Developed a data scrapping/formatting algorithm that produces a text dataset with annotated question and answers
- Leveraged a large language model to answer open-domain questions about Monmouth College courses
- Improved my ability to produce visualizations of machine learning models for comparison and explanation

Ostep Projects - File Systems Checker, Monmouth College, Monmouth, IL

- Expanded my understanding of the different aspects of file system consistency, such as how to check for invalid inodes, bad direct addresses, and directories that are not properly formatted
- A key aspect of the project was debugging due to working with and implementing low-level memory code. I spent a fair amount of time debugging and fixing errors in my code which furthered my skillset of debugging techniques

Ostep Projects - Concurrency xv6 Threads, Monmouth College, Monmouth, IL

- Gained experience in multi-threading. I learned how to create and manage threads, and how to ensure that they do not interfere with each other
- improved my knowledge of memory and how to debug multi-threading memory corruption
- Developed my ability to use different types of locks and conditional variables to prevent memory corruption, errors such as deadlock, and performance drops such as spinning

SOFT SKILLS

TECHNICAL SKILLS

- **Quick Learner**
- Self-Driven
- **Detail Oriented**
- Problem Solving
- Organized
- Communication
- Advanced Python, C, Sklearn, Windows, Mac
- Intermediate Assembly, SQL, HTML, CSS, Pytorch
- Advanced Beginner TensorFlow, C++, JavaScript, Linux

RELEVANT COURSEWORK

Monmouth College

- Intro to System Programming Improved my ability to write and debug c and assembly
- Data Structures and Algorithms Explored fundamental algorithms that can be implemented among foreign programming languages
- Computer Applications (Project course) Developed my ability to work in a software development team and apply foreign programming languages efficiently
- Machine Learning Explored the fundamentals of machine learning and improved my visualization, data analysis, and model implementation ability
- Artificial Intelligence Delved into the fundamentals of Artificial intelligence in topics such as problem formulation, statistics, algorithms, and implementation
- Operating Systems Expanded my understanding of operating systems in topics such as dynamic procedure activation, system structure, memory management, process management, and recovery procedures while also improving my ability to write and debug C code
- SQL Database Application Built and managed a database while learning how to write efficient SQL in MySQL interface (Carl Sandburg College)