Jackson McCall

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EDUCATION

Washington University in St. Louis   St. Louis, MO
M.S. in Computer Science   *Fall 2024 – Spring 2025*
B.S. in Computer Science, Computer Science GPA: 4.0   *Fall 2022 – Spring 2024*

The University of the South: Sewanee   Sewanee, TN
B.S. in Computer Science, Computer Science GPA: 3.76 (degree conferred 2024)   *Fall 2018 – Spring 2022*

EXPERIENCE

Research and Development Intern   Summer 2024
Kitware Inc.   *Minneapolis, MN*
- Completed large-scale refactoring of several open-source codebases to comply with new JATIC protocols
- Assisted in refactoring GitLab CI/CD Pipeline into atomic stages to meet new customer requirements
- Wrote new interface ImageMetric for the nrtk package
- Wrote ImageMetric implementation SNRImageMetric with corresponding unit tests
- Participated in the team's SAFe Scrum process

Machine Learning Intern   Summer 2023
NSIN - National Security Innovation Network   *Remote*
- Collaborated with a team to create an image classification model (>95% accurate) for the Department of Defense

Student Digitization Assistant   Fall 2022 - Present
WashU West Campus Library   *St. Louis, MO*
- Assisted digital imaging specialists in creating and processing images of library and special collection materials
- Developed Python scripts to assist in optimizing the digitization workflow

Research Assistant   Summer 2022
University of the South   *Sewanee, TN*
- Contributed to GridMusic, a generative music project, using the Processing programming environment
- Developed a sound and melody generator using Conway's Game of Life, integrated with *GridMusic*
- Refactored the codebase to run on Processing 4 (Java)

PROJECTS

Portfolio Website   Fall 2024
- Designed a portfolio website www.thejackmccall.com to better showcase my experience, projects, and ideas

Base Defense Roguelike Game | *Unreal Engine 5*   Fall 2023
- Developed a 3rd-person 3D base defense roguelike game with a team for the 2023 WashU Hackathon
- Designed the character movement system and melee attack system, also configured appropriate animations

Perceptron ML Algorithm | *Python*   Spring 2023
- Created and implemented the perceptron machine learning algorithm from scratch
- Implemented batch and sequential training methods, including support for non-linearly separable datasets

Space Cowboy 2D Platformer Game | *Unity, C#*   Spring 2022
- Collaborated with three friends to create a basic 2D platformer game in Unity
- Designed and implemented the final boss: a cactus with radial-spike attacks that increased in speed

TECHNICAL SKILLS

Languages: C++, Python, C, C#, x86-64 Assembly, Java, SQL, HTML, CSS, PHP
Frameworks and Libraries: Unity, Unreal Engine 5, TensorFlow, PyTorch
Tools: Linux, Git, GitLab, pytest, CI/CD Pipeline, Docker

LEADERSHIP & EXTRACURRICULAR ACTIVITIES

Captain of WashU Green/Red Collegiate Valorant Team   Fall 2022 - Present
Co-Founder and Captain of Sewanee PNG Collegiate League of Legends Team   Fall 2020 - Spring 2022