

H. TILLMAN JAMES

5793 McPherson Avenue, St. Louis, MO 63130 • 864.415.1591 • htillmanjames@gmail.com

EDUCATION

Washington University in St. Louis, James McKelvey School of Engineering GPA 3.8/4.0 St. Louis, MO
Master of Science in Systems Science and Mathematics Expected December 2022
Graduate Certificate in Data Mining and Machine Learning

Sewanee: The University of the South GPA 3.6/4.0 Sewanee, TN
Bachelor of Science in Mathematics – Magna Cum Laude May 2020
Minor in Economics

Honors: Engineering Masters Scholarship, Quintard Award Recipient, Dean's List, Order of the Gown

Relevant Coursework: Algorithms for Nonlinear Optimization, Machine Learning, Optimization, Probability, Stochastic Processes

TECHNICAL SKILLS

- Python (Scikit-Learn, TensorFlow), Java, Linux, GitHub, Microsoft Office Suite, Matlab, AutoDesk REVIT, Familiarity with Raspberry Pi

WORK EXPERIENCE

EXP – Electrical Engineering Intern | Orlando, FL May 2021 – August 2021

- Designed electrical circuiting in AutoDesk REVIT for restaurants, hospitals, hotels, and other major architectural design projects
- Worked with a team of Electrical Engineers to efficiently meet 100% of project submittals
- Collaborated with other departments to ensure project was completed in a holistic and thorough manner
- Adhered to strict national (NEC, NFPA), state, and company engineering code and specification to ensure that projects passed review by project managers

The Peddling Pelican – Mechanic | Hilton Head Island, SC May 2020 – August 2020

- Analyzed workflow and machine capabilities to allow technicians to clean and repair 1200 bikes per week
- Communicated complications of daily operations to managers in order to improve rental output
- Managed the loading and unloading of bikes to optimize delivery schedules and ensure customer satisfaction
- Gained technical knowledge about equipment and how to repair bikes in a time-efficient and low-cost manner

PROJECT EXPERIENCE

Autonomous Driving RC Car, St. Louis, MO January 2021 – December 2021

- Developed hardware and software for a small-scale car capable of traveling at consistent and variable speeds in addition to identifying paths to desired destinations
- Worked with student partners to develop a plan to ensure delivery of project objectives in an efficient time frame
- Utilized image processing (OpenCV) and data sampling techniques to achieve real-time autonomous navigation and consistent speed through PID control
- Manipulated real-time data fed from sensors to create speed and direction control algorithms in Python

COVID-19 Data Analytics Project, St. Louis, MO September 2020 – October 2020

- Filtered live COVID-19 Data to investigate case rate, death rate, and clustering in St. Louis City, County, and the remaining parts of Missouri
- Developed a simple algorithm using MATLAB's fmincon function to optimize overall model parameters for four stages of viral spread through the state-wide population

LEADERSHIP AND ACTIVITIES

Sewanee Sportsmen's House – President August 2019 – May 2020

- Managed 10 members of a themed residential house and met regularly with other leaders on campus
- Organized 10 events to educate the community on conservation, wildlife management and outdoor skills

Sewanee Department of Mathematics – Student Tutor August 2018 – May 2020

Sewanee Honor Council – Representative Fall 2016 – August 2018

- Collected and organized qualitative data from faculty, students, and staff for various Honor Code violations
- Adhered to a strict code of ethics laid out by the University pertaining to lying, cheating, and stealing

Eagle Scout August 2017 – August 2018

Interests

- Running Marathons (currently registered for Charleston Marathon January 2022)