

Andrew Gerstenslager

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Education

University of Cincinnati

- Bachelor of Science - Computer Engineering | (2019 - 2024) | GPA: 3.70/4.0
 - Minor: Finance
- Master of Science - Computer Science (2022 - anticipated May 2025) | GPA: 3.88/4.0

Research

Place Cell Inspired Navigation and Localization for Robots | August 2023 – Present

- Research-Based Senior Design & Master's Thesis. Integrating place cell based navigation system in iRobot Create3 as well as researching future extensions to apply to the model.

Autonomous Navigation in Complex Environments | August 2023 – December 2023

- Spearheaded training and building a multi-modal AI model for simulated rescue navigation, achieving over 80% accuracy with CNN-DNN, LiDAR, and camera integration.

Work Experience

84.51° | 2022 – 2023 | Cincinnati, OH

- **Data Science Co-Op (Summer 2023)**
 - Created and deployed package on TensorFlow LSTM autoencoder based anomaly detection
 - Architected the end-to-end package flow, ensuring streamlined integration
 - Optimized code to multi-GPU runtime to reduce model training time/cost by over 80%
 - Led product owner meeting on package use case, aiding data analysis strategy
- **Data Engineering Co-Op (Fall 2022)**
 - Contributed to the internal Python tools used for household matching package
 - Rewrote internal API from Flask to FastAPI to follow company standards
 - Created client-facing features in Angular for starting data analysis processes
 - Updated Terraform architecture for package updates and architecture changes

L3Harris | 2020 – 2022 | Cincinnati, OH

- **Computer Engineering Co-Op (4 semester-long rotations)**
 - Devised machine learning system for manufacturing failure prediction using scikit-learn
 - Transferred code repository from SVN to Git for 20+ person team
 - Developed testing software using C# .NET and standardized code to OOP

Leadership and Extracurriculars

UC Robotics Team | 2019 – 2023 | Cincinnati, OH

- **President (2020-2023):**
 - Developed vision processing pipeline in OpenCV to transform images and detect lines
 - Partnered with UC Marketing to bring t-shirt cannon to college football games
 - Modernized the team's codebase by migrating from ROS to ROS2
 - Engineered Arduino firmware for RC motor management, serial communication, and LEDs
 - Instated jira-inspired to-do boards for multiple projects to track action item progress

Technical Skills

Programming Skills:

- Python, C++, C#, SQL, PySpark
- Git, Jupyter Notebooks
- Linux, Ubuntu, Docker, Databricks

Data Analysis Skills:

- U-Net CNN Image Segmentation
- TensorFlow, Pandas, Numpy
- Deep Learning, Distributed Training