Gannon Smith

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EDUCATION

University of Michigan College of Engineering — Ann Arbor, MI

Bachelor of Science, Engineering in Computer Science Engineering | GPA: 3.75 — *Aug. 2021 – May. 2025*

Minor in Electrical Engineering

Courses: Machine Learning, Foundations of Computer Science, Web Systems, Computer Organization, Data Structures and Algorithms, Logic Design, Electronic Circuits, Discrete Mathematics

EXPERIENCE

Ford Motor Company — Dearborn, MI

Connected Vehicle Software Intern — *May. 2023 - July. 2023*

- **Algorithm Design:** Designed and implemented real-time hysteresis loop counting algorithm in C to condense a complicated load history of transmission torque. Resulted in reduction of application's PCM memory use by 98.3%.
- **Validation:** Developed proof of concept for real-time algorithm in Python, adding custom implementation of peak-valley filtering and buffer management. Resulted in proof of correctness that the algorithm identifies 100% of cycles.
- **Testing:** Created a model using MATLAB and Simulink to test algorithm in a realistic environment in parallel with other PCM components. Resulted in verification of functionality when simulated with real vehicle data.

Michigan Medicine — Ann Arbor, MI

Software Engineering Technician — *June. 2022 - April. 2023*

- **Automated Faculty Evaluation:** Developed Python application to generate reports for instructor evaluation based on data from forms in various databases. Resulted in a streamlined process for circulating reports based on varied queries.
- **Mi-TRAC:** Collaborated with faculty to determine design and functional requirements for Michigan Tool for Resident Assessment of Competencies. Resulted in initial project grant and extension of funding pending proof-of-concept.

University of Michigan — Ann Arbor, MI

Research Assistant - CSE Department — *Sept. 2023 - Current*

Tamarack Tower — Port Chester, NY

Web Developer and Server Administrator — *Sept. 2022 - Current*

- Developed web pages using HTML, CSS, and JavaScript and maintained server for nonprofit organization.

PROJECTS

Bubble App

- Developer for open source, end-to-end encrypted location-sharing app using Rust and PostgreSQL. Worked on the backend and frontend of the app, developing REST API and queries using MLS protocol.
- Collaborated in designing project architecture and independently developed the user authentication process.

Instagram Clone - *Web Systems*

- Implemented clone with client-side dynamic pages using React, JavaScript, HTML, and CSS using asynchronous programming and Flask and deploying with AWS.
- Developed backend REST API using Python with jinja templating and SQLite database.

Movie Review Sentiment Classifier- *Machine Learning*

- Developed a machine learning classifier employing Support Vector Machines (SVM) using Python and scikit-learn to determine sentiment from review using data from Prime Video.
- Utilized feature mapping techniques to enhance data representation and improve results.

ORGANIZATIONS

UM Autonomous Robotic Vehicle Navigation Team: Implemented A* path-planning algorithm in C++ using occupancy grid from LIDAR and ROS. Designed and developed GPS node in C++ to interpret coordinates using onboard GPS.

VictorCryptography VP & Founder: Leader in the cryptography club at UM, recruited 60+ members in the first two semesters.

Michigan Artificial Intelligence Safety Initiative: Discussed dangers of AI and participated in AI-alignment hackathons.

Michigan Student Artificial Intelligence Lab: Collaborated in RL, NLP, and classification machine learning projects.

PROGRAMMING SKILLS

Languages: C++, C, Python, Rust, JavaScript, SQL, C#, HTML, CSS, Verilog, ARM, MATLAB, R, Julia, LaTeX

Technologies: Linux, Git, Docker, Unity, CAD

Libraries and Tools: React, scikit-learn, Flask, numpy, JSON, Pandas, ROS, Regex, Jinja, Simulink