ALEXANDER FERRARA

🌐 www.linkedin.com/in/a-ferrara   ✉ alexanderferrara3@gmail.com   📞 678 749 8826

EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY   **Atlanta, GA**
B.S. Computer Engineering   *May 2017*
M.S. Computer Science   *December 2021*

WORK EXPERIENCE

General Motors   **Detroit, MI / Remote**

Senior Design Release Engineer – Autonomous Vehicle Computing   *December 2021 – Present*

- Provided technical leadership and decision-making for functional hardware development teams, resolving top pressing issues efficiently.
- Developed data processing tools to analyze large datasets, identifying component health anomalies during manufacturing and forecasting device reliability. This directly informed millions in spend decisions and enabled earlier device service logistics planning.
- Applied knowledge gained from autonomous vehicle compute platform design and development to optimize future compute systems development processes throughout full product development lifecycle.

Design Release Engineer – Autonomous Driving System Computer   *June 2019 – November 2021*

- Launched a new autonomous vehicle computing hardware platform
- Directed work of multiple international suppliers and cross functional team efforts including senior engineers and SMEs.
- Led project activities through design and development lifecycle from early experimental validation through commercial launch.
- Identified design, manufacturing, and assembly opportunities to satisfy vehicle program needs while minimizing cost.
- Operated at the intersection of Cruise start-up culture and GM automotive standard processes.
- Negotiated and managed spend on multimillion-dollar hardware/software development contracts.

Systems Engineer – Connectivity Technologies   *November 2018 – May 2019*

- Supported subject matter experts for technologies including Apple CarPlay, Android Auto, Bluetooth, and Wi-Fi.
- Led "Advanced Technology Work" project centered on vehicle data offloading and secure Wi-Fi enablers for V2X applications.
- Contributed to systems engineering specifications and requirements for several functional modules.
- Coordinated projection technology certification efforts for LG Low Radio Program, and supported feature/system owners on multiple. additional infotainment program certifications – collaborating with external partners such as Apple and Google.

Infotainment Execution Engineer   *July 2017 – October 2018*

- Led infotainment execution efforts across ten vehicle programs throughout system development cycle.
- Developed software tools to enhance workflow processes among infotainment and greater electrical community.
- Managed fleet of >100 vehicles coordinating shared usage, supplier consignments, vehicle maintenance, and ECU updates.
- Level 1 infotainment support at Proving Grounds facility providing issue root cause and resolution to ensure launch quality.

Booz | Allen | Hamilton   **Atlanta, GA**

Developer Intern   *May 2014 – August 2016*
Completed work full-time during summer semesters, as well as half-time throughout primary academic semesters

- Contributed source code, primarily focused on full stack web technologies, on eight client applications (federally contracted).
- Developed for projects throughout each stage of the software performance lifecycle (EPLC), all utilizing agile methodology.
- Exemplified leadership and presentation skills through management consulting-oriented intern case competition over the duration of each summer, winning first place while acting in the role of team leader.

Georgia Institute of Technology   **Atlanta, GA**

Undergraduate Teaching Assistant - Digital Design Laboratory   *August 2015 – December 2015*
Course focused on rapid prototyping of digital systems and FPGA design

- Facilitated a lab section of 25 students; supporting questions, resolving hardware issues, and validating student coursework.
- Oversaw project centered around I2C Controller with SCOMP I/O Interface.

Haplit – Georgia Tech Idea to Prototype Program, CreateX Startup Summer   *August 2015 – May 2017*
Multidisciplinary effort to develop a more affordable and durable learning aide for the visually impaired

- Provided electrical hardware and digital design expertise in design of refreshable braille display.
- Awarded Best Overall Project in Georgia Tech's Idea to Prototype program.

Freelance Mobile Application Developer   *November 2015 – August 2016*
Independent contract development of a social networking application to connect athletes and organize events

- Utilized emerging mobile development tools and technologies.
- Responsible for frontend design implementation as well as select backend capabilities.

SKILLS & INTERESTS

Proficiencies: Python, Technical Program Management, Full Stack + Web Development, C# / Java, C++, Digital Logic Design, MIPS Assembly, Android ADB, Embedded System Design, Computer Networking, Hardware + Software Development Processes

Experienced: SQL, Digital Signal Processing, Wireless Signal Interception and Packet Analysis, CS/Network Information Security, CAN, C, Oscilloscopes, Powershell, RTC/JIRA, Digital Logic Analyzers, Modelsim, MATLAB, VHDL, Vehicle Spy, Device Based Logging and Analysis

Achievements: GM Vehicle Engineering TRACK Stars Fall 2018, DFSS Black Belt Certification, GM Executive Reverse Mentorship Program

Hobbies: Skiing, travel, athletics, social functions, software development passion projects, gaming

RELEVANT COURSEWORK

Undergraduate Studies:

Embedded Computing Systems

Programming Hardware/Software Systems

Architecture, Concurrency, Energy in Computation

Integrated Circuit Fabrication

Capstone Design – Autonomous Boating

Graduate Studies:

High Performance Computer Architecture

Machine Learning for Trading

Artificial Intelligence for Robotics

Computer Networks

Algorithms