

Jacob Guttenplan

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20223 Saint Francis St
Livonia, MI 48152

**Bachelor of Science
Computer Engineering**
University of Pittsburgh
2017

**Outstanding Achievement
Award in Technology**
Dock Academy High School
2012

Activities:
**Formula SAE – Panther
Racing**
Sept 2014-Aug 2017
Electronics Lead 2016-2017

Student-Driven collegiate
race car design competition

Responsibilities included:
Onboard Electrical and
computer system design,
wiring harness design &
production, and Data
Acquisition & Analysis

Ranked Top 10% worldwide
during participation period

Skills

Languages: Java, C/C++, PHP, HTML, Python, JavaScript, MySQL, VBA, Simulink

Tools/Other: Git, Subversion, Agile Management Methodolgy, Scrum Development Process, ISO 26262 Software Dev. Safety Training Cert. (TÜV/Nord), HiL (Harware-in-loop) and SiL (Software-in-loop) testing, Powertrain Test Cell Testing, AUTOSAR Framework

Work Experience

AVL Powertrain Engineering Inc, Plymouth, MI

Project Engineer I – Controls & Electrification

July 2017 - Present

- Work as a Powertrain Controls Engineer to provide solutions for Lithium-Ion Battery Management System (BMS) Applications for various prototype and production deployments
 - Develop Requirements; Diagnose, develop and calibrate BMS functions, balancing, faults, and fault reactions to ensure vehicle safety and maximum functionality
- Developed AUTOSAR compliant Embedded Engine and Transmission physics-based control systems for a major Automotive Manufacturer, replacing industry-standard empirical control theories.
- Used Simulink Automatic C Code Generation to develop embedded controls solutions that were verified with HiL and Vehicle Testing
- Utilized CAN Networking and Vector CANalyzer to Reverse engineer & simulate vehicle functions in order to run Production Powertrains in a test cell without the vehicle knowing it is under test
 - Performed without the support of the Vehicle Manufacturer
 - Allowed for the support of more detailed tests and permitted AVL to achieve a wider testing gamut than previously realized
 - Vehicle is not aware of missing Body modules and believes they are working as intended – it is not aware it is in a test cell

Savvior Technology Solutions, Pittsburgh, PA

Web Applications Development Co-op

September 2014 – August 2016

- Worked directly with management and clients to develop project goals
- Collaborated with Front End Designers to create clean, intuitive User Experience (UX) designs that matched the clients' corporate brand identity and image
- Designed new products with the intent to be reused and incorporated in various future projects
- Increased unit test coverage in core product codebase from 65% to 90%

University of Pittsburgh – Student Computing Services

Technical Consultant

August 2012 – July 2017

- Provided tier two technical support to university students, faculty, and staff
- Uncovered source of major network issue plaguing half of a student dormitory, despite Network Operations Department's prior repeated efforts and failed diagnosis attempts
- Diagnosed and repaired network connection issues, performed malware removal, resolved driver and operating system supporting Windows, OSX, and Linux