Jacob Winick

Electrical Engineer
Ann Arbor, MI

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EDUCATION

Unversity of Michigan — Ann Arbor, MI

B.S. Electrical Engineering, Physics Minor — December 2016

Cummulative GPA: 3.90/4.00
Class of 1931E Scholarship, Regents Scholarship, Dean's List, William J. Branstrom Prize
Relevant Coursework: Wireless Communications, DSP, Motor Drive & Control, Analog Circuits

EXPERIENCE

Apple, Inc. — Cupertino, CA

Antenna Test Engineer / Project Management Intern - Wireless Design Group — Summer/Fall 2015

- Worked alongside antenna testing group and iPhone project management team to develop RF techincal skills while learning broader operations and design cycle planning for iPhone hardware
- Conducted antenna validation on iPhone using basestation emulators inside anechoic chambers
- Implemented and validated faster, more robust Total Isotropic Power (TIS) measurement using a modified version of TIS from RSSI
- Implemented Apache-based version control system for RF project management team to improve internal documentation and reduce overhead in cross-team executive meeting prep

Microsoft — Redmond , WA

Program Manager Intern - Developer Engagement Team — Summer 2014

- Built Bluetooth sample for a connected devices scenario between phone and desktop
- Exposed and fixed problems with Bluetooth API and documentation on MSDN
- Published blog post on MSDN to open opportunities for developers to use Bluetooth in Windows apps

MIT Lincoln Laboratory — Lexington, MA

Satellite Communications Research Intern - Division 6, Group 64 — Summer 2013

- Implemented MATLAB model for DoD next-gen satellite communications equipment
- Developed MATLAB GUI to demonstrate and validate next-gen satellite communications link
- Worked with PhD professionals and briefed industry sponsors on project progress

PROJECTS

Michigan eXploration Laboratory — Ann Arbor, MI

Research Assistant — 2016-Present

- Analyzing and testing embedded systems electronics to ensure proper functionality
- Learning proficiency with Altium 2D/3D PCB design software and Solidworks CAD
- Learning system architecture including groud station design and deployment, communication system and antenna design, and embedded system design

MRacing - Formula SAE — Ann Arbor, MI

Electrical Design Lead - Control Systems — 2012-2016

- Recruited and managed team of ten people in 2014-2015 to meet schedule and design goals to stay competitive in Formula SAE competition. Planning future expansion into Formula Electric
- Designed and built Arduino-controlled dashboard display to provide invaluable real-time data via ECU CAN-BUS for on-track testing and validation. Currently designing custom PCB to improve reliability, reduce weight, and implement additional functionality and system logging
- Developed and built electrically-controlled shifting systems using OpenECU hardware, custom H-Bridge PCB and MATLAB Simulink
- Built wiring harness to control engine, sensors, data collection, and driver controls

Undergraduate Research — Ann Arbor, MI

Metamaterials — Winter 2015

- Designed bandpass frequency selective surface at 10 GHz using Floquet port analysis in HFSS
- Manufactured surface using Duroid material and CNC router. Validated simulations using VNA testbed

ADDITIONAL

- C/C++, MATLAB, Python, Altium CAD, EAGLE CAD
- Car and motorcycle enthusiast, self-trained mechanic
- Built electric bike to speed up commute around campus
- Fundraised $4000 via Microsoft interns for YearUp charity
- Member of Eta Kappa Nu Honor Society and Phi Chi Theta Business Fraternity