

Benjamin Nold

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EDUCATION

OAKLAND UNIVERSITY
B.S. COMPUTER ENGINEERING
Expected Graduation May 2016
Rochester, MI | GPA: 3.81
Member of the Honors College
Dean's List (8 Semesters)

LINKS

Github:// [brnold](#)
LinkedIn:// [benjaminold](#)

COURSEWORK

UNDERGRADUATE

Digital FPGA Design
Microcontrollers
Theory of Computation
Signals and Systems
Data Structures (Java)
Computer Organization
German Language - Four Semesters

(Teaching Assistant)

Sophomore Engineering Design
A Mind for Numbers (Coursera)

SKILLS

PROGRAMMING

Comfortable:

Java • Shell • VisualBasic.NET • Matlab
Assembly (HCS-12) • Embedded C
VHDL • Verilog • MacOS • Linux
OpenFrameworks

Familiar:

Python • HTML • JavaScript • Android
C++ • L^AT_EX

INTERESTS

RESEARCH

CUDA • Embedded Systems
Virtual Reality

HOBBIES

Building and Flying RC Aircraft
Photography

RESEARCH

PURDUE UNIVERSITY | RADIO NAVIGATION LAB

May 2015 – August 2015 | West Lafayette, IN

- One of 162 out of 500+ applicants chosen to participate in the Summer Undergraduate Research Fellowship (SURF).
- Worked for Dr. James Garrison refining an embedded FPGA based Radio Frequency recorder for measuring ocean wave height via XM Satellite RF signals.
- Gained experience with RF signals, Ettus Universal Software Radios and Xilinx FPGA's.

OAKLAND UNIVERSITY | UNDERGRADUATE RESEARCH ASSISTANT

APPLIED RECONFIGURABLE EMBEDDED SYSTEMS LAB

May 2013 – present | Rochester, MI

- Participated on projects in a variety of areas including unmanned aerial vehicles, Android apps Virtual Reality and Internet of Things (IOT) applications.
- Gained extensive experience with the HCS-12 micro-controller's operation and programming.
- Created embedded systems that communicated through computer networks in both the home, office and enterprise environments.

PROJECTS

OU BIKE SHARE | ARES LAB

Summer 2014

- Finished the implementation of an electronic security system for the Oakland University Campus.
- Assisted in the PCB design process and the machining of the enclosure for mounting the system on the bikes to create five working prototypes.
- Worked with Oakland University's IT departments to allow the bikes to communicate to the server through the entire campus Wi-Fi network.

EMBEDDED CONTROLLER FOR A PLANAR ANTENNA | ARES LAB

Summer 2013

- Worked in a small group to design an embedded controller for a planar printed antenna array embedded in an unmanned aerial vehicle.
- Gained a knowledge of XBee series 2 modules that were used to create a small wireless mesh network to test the antenna's range and throughput.

AWARDS AND SOCIETIES

2014 O.E. Hunt Engineering Scholarship
2014 Tau Beta Pi Engineering Honor Society
2013 Tau Beta Pi Sophomore Recognition
2012 Alpha Lambda Delta Honors Society

PUBLICATIONS

Paper "Performance Improvements of Embedded Planar Fixed Beam Arrays in Flying UAV's." IEEE Symposium on Antennas and Propagation 2015

Abstract "Refinement and Validation of a Real-time Airborne System for Remotely Sensing Ocean Surface using Communication Satellite Signals." Purdue SURF Symposium 2015, Purdue e-Pubs.

Poster "Embedded Planar Printed Smart Antenna Array for UAV's" ASEE NCS 2014