

Adam Polak

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Objective

To apply professional engineering skills and experience to engineering challenges through employment involving the research, development, integration and sustainability of innovative aerospace systems.

Education

Bachelor of Science in Aerospace Engineering (Aeronautics) **December 2015**

- Barrett Honors College, Ira A. Fulton School of Engineering, Arizona State University
- Magna Cum Laude, Cumulative GPA – 3.65

Relevant Coursework: Principles of C++, Assembly Language, Digital Design, Circuits, Thermodynamics, Aerodynamics, Space Vehicle & Aircraft Dynamics, Feedback Control, Guidance & Navigation of Aerospace Vehicles, Aircraft Propulsion, Vibration Analysis

Work Experience

Aerospace Engineer **Dynetics Inc, Huntsville, AL** **December 2015 – Present**

- High-fidelity modeling and simulation of missiles and unmanned systems

Applications Engineering Intern **Honeywell Aerospace, Deer Valley, AZ** **May 2015 – August 2015**

- System integration, certification and support of Primus Apex integrated avionics systems
- Pilatus PC12 flight test support and Viking DHC-6 Twin Otter HIRF certification testing
- Primus Epic avionics hardware verification and validation for Embraer E2 Custom IO module

Research Assistant **ASU - SESE, Tempe, AZ** **May 2014 – November 2014**

- Systems engineering and ACS verification for the Asteroid Origins Satellite (AOSAT) CubeSat mission

Controls Engineering Intern **NASA – MSFC, Huntsville, AL** **May 2012 – August 2013**

- Multicopter Simulink model, attitude controller and simple Kalman filter for attitude estimation
- Host of weekly GNC workshop for multicopter design and construction
- MATLAB image processing algorithm for position estimation and target recognition
- Design and construction of low-cost multicopter robotic lander test platform

Honors and Awards

ASU President's Scholarship, Arizona Regents High Honors Scholarship, NSF STEM Scholarship, AHS Arizona Vertical Flight Engineering Scholarship, Grainger Foundation Scholarship

Extracurricular Activities

AIAA, AHS, IEEE, Air Devils DBF, FIRST Robotics Team #1492, Project Lead the Way, Skills USA

Skills

Rapid Prototyping, CAD Modeling, Autodesk Inventor, SolidWorks, Control Systems Design, Modeling & Simulation, Simulink, MATLAB, C/C++, Assembly Code, Multirotor Aircraft Systems, Avionics, Electronic Prototyping, Embedded Software, Arduino, Adobe Creative Suite, Microsoft Office, Web Development

Projects

Scale Prototype Jet Turbine-powered VTOL Aircraft **2014**

- Electronic prototyping, design, assembly, system modeling, control design and flight testing

Image-assisted Inertial Navigation System for a Low-cost Micro Air Vehicle **2013 – 2014**

- Rapid prototyping, system modeling, control design and embedded code generation for low-cost MAV
- Improved navigation state estimations using optical flow velocity measurements