John M. C. Jackson

2436 Irving Ave. S.
Minneapolis, MN 55405

612-323-8120
jmcjack@gmail.com

Education

Master of Aerosapce Engineering and Mechanics — Anticipated Graduation May 2018
Bachelor of Aerospace Engineering and Mechanics — Graduated May 2015
University of Minnesota, Twin Cities - Minneapolis, MN — GPA: 3.42/4.00

Experience

Graduate Research Assistant University of Minnesota *Summer 2016* - Present

- Exploring concepts and requirements for expedited US border crossings using electronic vehicle trackers.
- Preparing reports and communicating progress with Dept. of Homeland Security project sponsors.
- Investigating machine learning tools to augment GPS navigation with inertial features.

Research Scientist ASTER Labs, Inc. *Fall 2015 - Spring 2016*

- Prototyped and tested iOS and Android mobile applications for healthcare and navigation projects.
- Wrote and proofread proposals for NASA, NIH and other SBIR and STTR funding announcements.
- Developed a C# Windows application for wireless data streaming and visualization for IMUs.

Research Assistant NASA Armstrong FRC *Summer 2015*

- Repaired and calibrated the actuators of a small, unmanned aerial system (sUAS) prior to flying.
- Assembled a Simulink simulation using 6-DOF aircraft model to simulate aircraft dynamics.
- Performed aerodynamic parameter estimation from aircraft flight test data to refine model.

Research Assistant University of Minnesota UAV Lab *Fall 2013 - Spring 2015*

- Assisted in porting flight software for the Beaglebone Black microcontroller, originally for MPC5200B.
- Wrote C drivers for interfacing with sensors such as the VectorNav IMU/GPS and MTS cellular modem.
- Tested a cellular-signal based navigation solution for sUAS flying in GPS-denied scenarios.

Aerospace Engineering Intern Fourthwing Sensors, LLC *Summer 2014 - Fall 2014*

- Analyzed telemetry and autopilot data to characterize flights and investigate incidents.
- Performed flight-testing of company sUAS prior to shipment in addition to training coworkers.
- Created an interactive, easy-to-use toolbox in Octave for sUAS flight data analysis.

Skills

Android & iOS Programming	2 years	MATLAB & Simulink	5 years
C/C++	4 years	Python	2 years
Github	3 years	Solidworks	3 years
LaTeX	3 years	sUAS Techology	2 years

Awards

Albert George Oswald Research Award — *Fall 2014*
Outstanding Student Group Leader — *Spring 2014*
Undergraduate Research Opportunities Program — *Fall 2013*
Eagle Scout — Boy Scouts of America, Troop 25 — *Spring 2011*

Organizations

Outreach/STEM Chair of AIAA Twin Cities Chapter — *Fall 2015* - Present
Volunteer at Minnesota Literacy Council — *Fall 2015* - Present

Publications

Layh, Trevor, Larson, Jordan, Jackson, John, Taylor, Brian, Gebre-Egziabher, Demoz, "A Recovery System for SUAV Operations in GPS-Denied Environments Using Timing Advance Measurements," *Proceedings of the 2015 International Technical Meeting of The Institute of Navigation*, Dana Point, California, January 2015, pp. 293-303.