

James Gadoury
(508)353-9022
www.jamesinspace.com

35 Stoneybrook Road, Charlton, MA 01507
gadouryjames@gmail.com

EDUCATION:

Worcester Polytechnic Institute (WPI), Worcester, MA: BS in Aerospace Engineering, GPA: 3.7/4.0

EXPERIENCE:

McGowan Consulting Group Inc., Shelton CT

Assigned To Sikorsky Aircraft

Project Manager

June 2017-Dec 2017

- Due to performance as test engineer, consistently exceeding expected metrics, and demonstrated leadership with the existing engineering staff I was given additional project management responsibilities on top of existing test engineer responsibilities
- Trained team of new hire engineers in developing test vectors using **MATLAB**, **Simulink**, and **Stateflow** and verifying Flight Control Software requirements
- Managed a group of engineers that consistently out-performed weekly expected metrics on two separate projects
- Prioritized tasks of each engineer to ensure that all objectives were completed effectively for both projects based on client priority

Software/Avionics Test Engineer

May 2017-Dec 2017

- Developed a deep understanding of client aircraft, navigation systems, and controls in order to effectively develop flight simulations
- Designed test vectors using **MATLAB**, **Simulink**, and **Stateflow** to simulate and test aircraft control models to verify that they perform according to customer requirements
- Tested various filters associated with flight computers to ensure that they performed the signal processing necessary for the requirements of the control model
- Verified that the control logic in the Flight Control Software was written correctly to perform as required by the model based on application of understanding of Aircraft Dynamics and Control
- Utilized **LDRA** software to test Flight Control Software and verified that each model within the software satisfies coverage requirements
- Wrote **Python** scripts to automate typical daily processes and optimize efficiency

Automatic Rolls of New England, Dayville CT

Machine Operator

May 2013-Jan 2014

Polyvinyl Films Inc, Sutton MA

Machine Operator

Jan 2013-May 2013

PROJECTS:

jamesinspace.com

Jan 2018-Feb 2018

- Developed a personal website to showcase skills using HTML, CSS, Javascript, and Bootstrap

Design and Analysis of a CubeSAT Mission

Aug 2016-March 2017

- Developed an Attitude Determination Control System (ADCS) for a nano-satellite tasked with delivery of a scientific instrument into orbit to record space weather
- Wrote and edited **MATLAB** code to create a simulation GUI (graphical user interface) that simulated the different stages of the mission including a detumble phase, initial determination phase, and an attitude recursive maintenance phase
- Evaluated and chose sensors and actuators for the nano-satellite's ADCS to ensure mission success while optimizing figures of merit
- Developed control algorithms for the nano-satellite to detumble after it is launched from Earth's surface and then later direct the scientific instrument to the correct orientation to capture the mission-specific scientific data
- Developed attitude determination algorithms to find an initial determination of the nano-satellites position in orbit and to constantly find its orientation with respect to the Earth and Sun
- Tested and optimized ADCS to maximize the probability of success for the science mission using **MATLAB** simulation GUI

Aircraft Dynamics and Control

Oct 2016-Dec 2016

- Designed and wrote **MATLAB** scripts simulating aircraft motion in 3D space
- Developed aircraft controls to maintain aircraft stability and equilibrium while adjusting orientation and heading
- Designed and conducted system control effectiveness testing using **MATLAB** to test simulation code and **Simulink** to simulate input/output signal processing of controls

Guidance, Navigation, and Communication

Aug 2016-Oct 2016

- Developed **MATLAB** code to find the position of a receiver and correct for clock bias and position error from data obtained from multiple satellites
- Developed **MATLAB** code for an inertial navigation system utilizing accelerometer and gyro readings to find its position
- Developed a missile guidance system to hit targets with random trajectories using proportional guidance law
- Contributed to development of an Extended Kalman Filter designed to correct for sensor noise increasing accuracy of the missile
- Tested effectiveness of missile guidance system through simulation using **MATLAB** scripts
- Achieved one of the highest hit rates in class at over 90% success rate

SKILLS:

Software: LabVIEW, STK, LDRA, Simulink, Stateflow, Microsoft Office

Programming Languages: C/C++, Java, MATLAB, Python, HTML/CSS, MySQL, Javascript

Activities: Phi Theta Kappa Honor Society, Alpha Zeta Theta Chapter