Adrian Danao-Schroeder

B.S. Aerospace Engineering • **B.A. Chinese Language and Culture**

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EDUCATION

University of Maryland College Park, College Park, MD **GPA: 3.21**

Bachelor of Science   Aerospace Engineering **May 2019**

Bachelor of Arts   Chinese **Aug. 2019**

Relevant Courses: Space Propulsion, Mechanics of Composites, Linear Controls, Vibrations and Aeroelasticity

PROJECT EXPERIENCE

Terrapin Rockets Development Team, *Propulsion Team* **Oct. 2017 – May 2019**
- Developed a paraffin and liquid N_2O hybrid rocket motor and test stand capable of producing 200 lb. of thrust
- Utilized ANSYS Fluent and CHEMKIN to simulate combustion chamber dynamics to determine regression rates, predicted chamber pressure and temperature for the small scale test stand
- Designed hybrid rocket motor rocket to push a 8.5kg to 30,000 ft. for the Spaceport America Cup

Deployable Heat Shield, Space Systems Laboratory, *Mechanical Team Leader* **Jul. 2018 – Jul. 2019**
- Designed a deployable heat shield to recover a 3U CubeSat from low earth orbit
- Simulated reentry conditions and flow over heat shield at hypersonic reentry velocities
- Used methods of characteristics and ANSYS Fluent CFD, to determine ballistic coefficients, flight trajectory and passive stability in hypersonic, supersonic and subsonic flight

CanSat Competition 2018 Deployable Heat Shield, *Mechanical Team Leader* **Oct. 2017 – Jun. 2018**
- Designed and built a rocket launched probe to test and simulate a deployable heat shield to slow probes descent
- Used ANSYS Fluent CFD simulations of descent rate and stability of probe and heat shield during flight to modify the design accurately determine the flight characteristics
- Placed 4th among 104 international teams competing in competition

Flight Controller for Propulsive Landing, Control of Aerospace Systems **May 2018**
- Developed a flight control algorithm to land a simulated rocket on a moving barge
- Flight controller implemented noise pre-filtering, external disturbance rejection and second order target tracking

SKILLS

Programs: ANSYS (Fluent, FEA, CHEMKIN), Siemens NX, NASTRAN, STK, SolidWorks, AutoCAD, MATLAB

Fabrication Skills: Welding (TIG and Stick), Lathe, Milling, General Shop Machines

Programming: Java, JavaScript, Python, C++, HTML, CSS, Ruby

Foreign Languages: Spanish (Native Fluency), Chinese (6 years of study)

WORK EXPERIENCE

Link Coder, Online Publications Dept. at American Immigration Lawyers Association **Aug. 2019 – Present**
- Worked on document conversion code to convert completed legal documents to HTML for online publication
- Wrote documentation and maintenance manuals for existing document conversion and database management
- Created an automated and manual lookup tool to link document references to an online document database
- Reduced time to review converted HTML documents from 2 business days to 2 hours

Software Licensing Associate, University of Maryland Division of IT, **Feb. 2016 – Sep. 2018**
- Licensed and managed software contracts, distribution and maintenance for the University of Maryland
- Administer software distribution service for all members of the University of Maryland
- Provided technical support and troubleshooting for problems related to software installation and licensing
- Hired and trained new staff members to manage distribution and provide technical support to faculty and staff