Adrian Danao-Schroeder

B.S. Aerospace Engineering · **B.A. Chinese**
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Education

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University of Maryland College Park GPA. 3.24

Bachelor of Science — Aerospace Engineering — May 2019

Bachelor of Arts — Chinese — Aug. 2019

Relevant Courses: Space Propulsion, Space System Design, Mechanics of Composites, Linear Controls, Vibrations and Aeroelasticity, Dynamics of Aerospace Systems, Space Flight Dynamics, Aerodynamics

Work Experience

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Link Coder, American Immigration Lawyers Association — Aug. – Oct. 2019

- 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

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Software Licensing Associate, Univertsity of Maryland Division of IT — Feb. 2016 – Sep.2018

- Licensed and managed software contracts, distribution and maintenance for the University of Maryland
- Administered the University of Marylands software distribution service
- 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

Projects

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Deployable Heat Shield, Space Systems Laboratory — 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

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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

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CanSat Competition 2018 Deployable Heat Shield 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 4^{th} among 104 international teams competing in competition

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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 Languages: Python, C++, Java, HTML, CSS, JavaScript, Ruby, LaTeX
Foreign Languages: Spanish (Native Fluency), Chinese (6 years of study)