Malachi Williams

malachiw@uw.edu | (253) 722-4073 | www.linkedin.com/in/malachiw1 | malachiw.com

EDUCATION

University of Washington, Seattle, WA   Anticipated Graduation 06/2017
Dual Degree: Civil/Mechanical Engineering | **Minor**: Aeronautical & Astronautical Engineering
Relevant Coursework: Structural Analysis, Rocket Propulsion, Fluid Mechanics, Construction Engineering, Structural Design, Construction Materials, Geotechnical Surveying/Engineering, Transportation Engineering, Mechanics of Materials

SKILLS

Mastery (daily use): Solidworks, CATIA V5, MATLAB, PDM, Enovia, GD&T, Lean engineering/5S, LaTeX, Spanish
Proficient (6+ months): ANSYS (structural, thermal, electromagnetic), 3D printing, MS Project, Manufacturing, Sketch (UI/UX), HTML5/CSS Web Design
Learning: Machine shop fabrication, Abaqus, AutoCAD (Civil 3D)

PROFESSIONAL EXPERIENCE

Tesla Motors, Design Engineering Intern, Palo Alto, CA   06/2016 – 09/2016
- Working on exciting problems to improve exterior vehicle systems!

Boeing, Fuel Systems Design Engineering Intern, Renton, WA   06/2015 – 09/2015
- Traveled to permanent mold casting foundry to create visual inspection criteria and guidelines for suppliers to mitigate surface discontinuities found on aluminum cast parts
- Built support brackets using CATIA V5 sheetmetal workbench and created detailed installation drawings for the fuel quantity indication system wash line tubing
- Investigated and resolved pre-flight volumetric tap off issues and completed drawing change release process in a timely manner as to not impact production

Boeing, Materials Review Board Liaison Engineering Intern, Renton, WA   06/2014 – 09/2014
- Developed repair instructions to resolve damage/deviations on the CFM56-7B turbofan engine structure and components
- Utilized knowledge of material specifications and manufacturing processes to ensure that specifications, design, criteria and performance schedules were maintained
- First intern to be sole engineer on site to facilitate engine build up line at 42 airplanes per month build rate

Boeing, Engine Build Up Design Engineering Intern, Renton, WA   06/2013 – 09/2013
- First intern to lead a product revision improvement project, directed project through design release process and coordinated with vendor to ensure design changes did not affect part quality or lead time
- Developed, maintained and modified structural engine component designs using CATIA V5 to provide product definition to other engineering groups, production operations and customers

PROJECTS

UWashington Hyperloop | http://hyperloop.io   06/2015 – Present
- Team Director - Propulsion/Mechanical Engineer - Manufacturing Engineer, led team to top 20 placement out of over 1,200 teams
- Performed and led sub-teams in Structural FEA, mechanical design, thermal/electromagnetic system analysis, and carbon fiber shell design/manufacturing
- Received Subsystem Safety Technical Excellence Award for pod design detail, strength of supporting analysis/tests, and quality presentation to board of engineers
- Utilized Python in OpenMDAO platform with pyCycle thermodynamic modeling tool for operational analysis of the Hyperloop pod compression system: inlet, compressors, heat exchangers, ducting and exhaust nozzle

Solidworks/CATIA V5 Projects | https://grabcad.com/malachi.williams-1/   12/2014 - Present
- In progress with designing surface models of an Audi A3 and BMW M3 sedan
- Designed and developed high volume solid model assembly and drawings of a French press