

Malachi Williams

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SKILLS

- Proficient (6+ months): Solidworks, CATIA V5, MATLAB, Excel / PowerPoint / Word, LaTeX, Spanish
- Familiar: ANSYS, HTML / CSS / JavaScript, NASTRAN, PATRAN

EDUCATION

University of Washington, Seattle, WA Anticipated Graduation 06/2017

- *Majors: Civil/Mechanical Engineering – Dual Degree | Minor: Mathematics*
- *Completed Coursework: Introduction to Structural Design, Fundamentals of Materials Science, Construction Materials, Introduction to Scientific Computing, Statics, Mechanics of Materials, Introduction to Visualization & CAD, Elementary Differential Equations, Matrix Algebra, Multivariable Calculus, Fundamentals of Electrical Engineering, Engineering Dynamics, Statistics for Engineers*

PROFESSIONAL EXPERIENCE

Boeing, Fuel Systems Design Engineering Intern, Renton, WA 06/2015 – Present

- 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 bracket using CATIA V5 for the fuel quantity indication system wash line tubing, and detailed installation drawings along with a CATIA V4 to V5 conversion
- 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

- Developed, maintained and modified structural engine component designs using CATIA V5 to provide product definition to other engineering groups, production operations, suppliers and customers
- First intern to lead a major product revision improvement project, directed project through release process for the Cowl Thermal Anti-Ice Valve all while working directly with supplier

PROJECTS

UWashington Hyperloop, Director | <http://uwashingtonhyperloop.org> 06/2015 – Present

- Team Director and Propulsion team lead – work statement focuses on computational fluid dynamics, propulsion systems design, finite element analysis and overseeing a team of 40 University of Washington engineering/business students
- Working to compare studies of cost and engineering scalability of air bearing suspension against magnetic levitation, along side developing secondary propulsion mechanisms for inflight stability, and maintaining speed
- Co-lead of Manufacturing team, working on material analysis, tooling capabilities and pod building

Solidworks Projects | <https://grabcad.com/malachi.williams-1/> 12/2014 - Present

- Designed and developed solid model assembly with drawings of a French press using actual dimensions
- In progress with designing surface model of a conceptual electric sports car
- In progress with designing a fully dimensioned conceptual smart watch