

Malachi Williams

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PROFESSIONAL EXPERIENCE

- 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 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** | <http://uwashingtonhyperloop.org> 06/2015 – Present
- Team Director / Propulsion Team Lead / Manufacturing Team Lead
 - Overseeing a team of 45 University of Washington engineering/business students, work statement focuses on computational fluid dynamics, propulsion systems design, finite element analysis, tooling capabilities and pod manufacturing
 - Using 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
 - Comparing studies of cost and engineering scalability of magnetic levitation suspension systems, alongside designing secondary propulsion mechanisms for inflight stability/speed
- Solidworks Projects** | <https://grabcad.com/malachi.williams-1/> 12/2014 - Present
- In progress with designing surface model of a conceptual electric sports car
 - In progress with designing a fully dimensioned conceptual smart watch
 - Designed and developed solid model assembly and drawings of a French press using actual dimensions

EDUCATION

- University of Washington**, Seattle, WA Anticipated Graduation 06/2017
- Majors: Civil/Mechanical Engineering – Dual Degree | Minor: Mathematics
 - *Completed Coursework: Intro to Structural Design, Fund. of Materials Science, Construction Materials, Intro to Scientific Computing, Statics, Mechanics of Materials, Intro to Visualization & CAD, Elem. Differential Equations, Matrix Algebra, Multivariable Calculus, Fund. of Electrical Engineering, Engineering Dynamics, Statistics for Engineers*

SKILLS

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