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