David Coven

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Education

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

Major: Mechanical Engineering **Minor**: Mathematics & Entrepreneurship

Relevant Coursework: CAD/CAM Technologies, Statics, Mechanics of Materials, Introduction to Visualization & CAD, Introduction to Scientific Computing, Elementary Differential Equations, Matrix Algebra, Linear Analysis, Fundamentals of Electrical Engineering, Engineering Dynamics, Statistics for Engineers, Fundamentals of Materials Science

Skills

Proficient (6+ months): SolidWorks, MATLAB, Excel, Ruby / Ruby on Rails, HTML / CSS / JavaScript, LaTeX

Familiar: CATIA V5 (Aerospace emphasis), Java, Python, NASTRAN, PATRAN

Professional Experience

Boeing, Systems Engineering Intern Everett, WA — 06/2015 – Present
- Continuing 2014 work to optimize and develop user interfaces for testing automation
- Investigating lifecycle or product issues to provide technical analysis and solutions

Boeing, Systems Engineering Intern Everett, WA — 06/2014 - 09/2014
- Wrote software in Java to analyze and represent over 35,000 rows of part/tool data
- Built custom interfaces to maximize automation, accelerating by production by 60% reducing workflow by 50hrs/week
- Developed webserver in Python using CherryPy to handle interface requests

Boeing, Design Geometry Requirements Intern Everett, WA — 06/2013 - 09/2013
- Gained practical experience in aerospace part design with CATIA through modeling landing gear
- Modeled preliminary features for fuselage components based on drawing sheets and performed low level part analysis
- Ran low level function and integration test for newly designed parts
- Developed system architecture to organize over 15,000 documents, and efficiently produce part design outlines
- Designed a custom interface in Java to cross-compare, manage, and represent part data streamlining efficiency of employees by 20% (~10hrs/week)

Scholarship Junkies, President & Executive Director Seattle, WA — 05/2013 - Present
- Oversee a team of 41 to assist hundreds students a year nationwide with scholarships, on $3,000 budget over two years, generating over $500,000 in scholarships support
- Won 1st place in Seattle Venture Partners Pitch Competition, University Non-Profit division
- Accepted into Jones + Foster Accelerator, with $25,000 investment
- Conducted over 75 presentations nationwide teaching essay improvement and scholarship winning tactics to high school students

Research

Molecular Science & Engineering Lab, Assistant Researcher Seattle, WA — 05/2013 – 01/2015
- Utilized molybdenum sulfide to build atomically thin 2D sheets a for use in solar cells
- Synthesized inorganic solar cells using top down, and bottom up chemical synthesis
- Worked to synthesize inorganic—organic mix solar cell using Perovskite synthesis
- Investigated silver nanowires synthesis for use in electronic devices

Cellular BioMechanics Lab, Assistant Researcher Seattle, WA — 08/2012 – 08/2012
- Developed a mechanical sensor to measure single platelet forces and study the role of platelet receptors in platelet contractility
- Collected data and analyzed stress vs. strain curves to graph accurate material elasticity and deformation within Excel

University of Washington, National Science Foundation Intern/Assistant Researcher Seattle, WA — 06/2012 – 08/2012
- Investigated zero-energy buildings based on energy-harvesting electrochromic windows and thermoelectric systems
- Used the Bullitt Center as a case study to analyze effective methods of active and passive architectural design strategies
- Evaluated plugload consumption and data trends in multiple architecture buildings using Excel

Projects

UWashington Hyperloop, Director | http://uwashingtonhyperloop.org 06/2015 – Present
- Team director and Aerodynamics team lead I focus on computational fluid dynamics, capsule design, and finite element analysis
- Co-lead of business management team, working on sponsorships, presentations, and business plan

Solidworks Projects | https://grabcad.com/david.coven-1 — 11/2014 – Present
- Designed and built functional Tesla inspired forklift from scratch using actual dimensions
- Designed and developed RC – Helicopter solid model from actual dimensions
- Designed and developed UAV using solid modeling techniques from actual dimensions
- Currently in progress with designing surface model of Tesla Model S and AudiR8