David Coven

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Education

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

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

Relevant Coursework: Engineering Statics, Mechanics of Materials, Introduction to visualization & CAD, Introduction to Scientific Computing, Elementary Differential Equations, Matrix Algebra, Linear Analysis, Fundamentals of Electrical Engineering

Skills

Proficient (6+ months): , HTML / CSS / Javascript, LaTeX, SolidWorks, Excel

Familiar: CATIA V5- AUTOCAD (Aerospace emphasis), MATLAB, Java, Python, Ruby / Ruby on Rails

Professional Experience

Scholarship Junkies, President & Executive Director Seattle, WA — 07/2013 - Present

- Oversee a team of 31 to assist 200+ students a year nationwide
- Led team on $3,000 budget over two years, generating over $500,000 in scholarship support
- Won 1st place in Seattle Venture Partners Pitch Competition, University Non-Profit division
- Conducted over 75 presentations nationwide teaching essay improvement, and scholarship winning tactics to high school students

Boeing, Systems Engineering Full Stack Developer Intern Everett, WA — 06/2014 - 09/2014

- Composed software in java to analyze and represent over 35,000 rows of part/tool data
- Built custom interfaces to maximize script automation using standard frontend technologies
- Developed webserver in Python using CherryPy to handle interface request
- Accelerated production by 60%, and reduced workflow by over 50hrs/week of manual BASH-Shell script calling

Boeing, Design Geometry Requirements / Programming Intern Everett, WA — 06/2013 - 09/2013

- Enhanced system architecture to organize over 15,000 documents.
- Designed a custom interface in Java to cross compare, manage, and represent part failure data
- Streamlined data comparison efficiency of employees by 20% (~10hrs/week)

Research

Molecular Science & Engineering Lab, Assistant Researcher Seattle, WA — 05/2013 – Present

- Utilized molybdenum sulfide to produce atomically thin 2D sheets and disk for use in solar cells.
- Synthesized inorganic photovoltaic solar cells using top down, and bottom up chemical synthesis
- Worked to synthesize inorganic—organic photovoltaic solar cell using Perovskite synthesis
- Developed silver nanowires synthesis for use in electronic devices

Cellular BioMechanics Lab, Assistant Researcher Seattle, WA — 08/2012 – 08/2012

- Learned how to fabricate micro and nano instruments, developing 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

Solidworks | https://grabcad.com/david.coven-1 — 11/2014 – Present

- Improved understanding of component relationships through weekly CAD prototypes, from iphone 4s to RC helicopter

Open Doors | https://engx.co/opendoors — 05/2014 – Present

- Developing a multipurpose web app to support students getting into their major, research, internship, and being more involved on campus,
- Website built using HTML/CSS/Javascript, Ruby on Rails backend, and PostgresDB

Wreckless Abandon | https://engx.co/wrecklessabandon — 05/2014 – 09/2014

- Developed an e-commerce platform to sell modular longboard attachments
- Modeled longboard and custom brake pads in Solidworks

Community Involvement

Increasing Academic Achievement for African American Male Scholars Think Tank — 08/2014 – Present

DubHacks Hackathon Executive Organizer — 07/2014 – Present

Dream To Succeed: Ackerely Leadership Scholarship / Grant — 05/2013 – Present