Mitch Robinson

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Education

University of California, Berkeley — Berkeley, CA

Major: Mechanical Engineering — GPA: 3.53/4.00

Minor: Materials Science Engineering — Graduation: May 2016

Coursework: Thermodynamics, Fluids, Circuits, Finite Elements, Microprocessors, Mechanics, Statics, Aerodynamics, Product Design, Mechatronics, Dynamics, Material Properties

Experience

Mechanical Intern: Game Ready Systems — Jun. 2015 - Current

- Utilized LabVIEW software to build control scheme for thermodynamic water cooling and heating pump
- Designed experimental layout with A/D converters, thermodynamic pump set ups, and manufactured parts

Grid Researcher: Lawrence Berkeley National Lab (LBNL) — May 2015 – Current

- Using Simulink and MATLAB to model electric vehicles, and lead front end developer for website
- Helping to build application that informs public about electric vehicle integration into their current life

Researcher: UC Berkeley Nano-Manufacturing Lab — May 2014 – Jan. 2015

- CAD Modeling: Designed 3D printed pieces in Solidworks to build fully functional wind tunnel
- Constructed revolutionary micro-surfaces to be tested for AC efficiency

Systems Engineering Intern: PAC 12 Networks — Jan. – Jun. 2015

- Developed new remote camera product to be used for long-distance television interviews
- Assisted with design and planning of in house infrastructure and server architecture maintenance

Project List

Finite Element Analysis (FEA) and MATLAB Modeling — Aug. – Dec. 2014

- Utilized FEniCS and COMSOL FEA programs to solve fluid, structural, and heat systems governed by PDEs
- Used vortex panel algorithm to determine pressure distribution and lift for airfoils
- Built simulation using Euler's method and MATLAB to track the 12 components of 3D motion

LabVIEW Design: Infrared Tracking Nerf Gun — Jan. – May 2015

- Implemented IR sensor and LabVIEW interface with Wiimote to use in motion tracking
- Implemented PID control schemes and servomotor interface to track and fire at LED targets

Product Development: 3D CAD and Mobile App — Jan. – May 2015

- Building CAD models of electric skateboard and modular screen displays for later development/ manufacturing
- Currently designing an iPhone application that brings shopping for clothes to mobile devices

Electronic Design, Fabrication, and Testing — Jan. – May 2015

- Built a fully functioning EEG system by designing electrical PCB components and then soldering them on
- Advanced experience in electrical assemblies, wiring, and debugging of A/D converters and control schemes

Skills

FEA: FEniCS, COMSOL, Paraview, ABAQUS, ANSA

Software/Simulation:
LabVIEW Certified
MATLAB/ Simulink, Python, Latex

CAD:
Solidworks Certified
Fusion 360, AutoCAD, Inventor, Pro-Engineer, CATIA V6, Unigraphics NX

Other Skills:
Microsoft Office, Illustrator, Photoshop, Sketch, GD & T, Mechanical Wrenching, Drafting, HTML 5, Rapid Prototyping

Leadership

President: UC Berkeley Roller Hockey Team — Jan. 2014 – Current

- In charge of overseeing all club operations in coordination with UC Berkeley and affiliate league
- Team captain and coach building upon over 15 years of roller hockey experience