Brian C. Lyn

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Education

Florida State University **Tallahassee, FL**

Bachelors of Science in Mechanical Engineering May 2018

Skills

Software: MicroStation, Creo Parametric (PROE), ADAMS, Autodesk ForceEffect, Autodesk ForceEffect Motion, LTSplice, Visio, Power Point, Excel, Word.
Coding/Scripting: MathCAD, MATLAB, C++, C, UNIX, Python, VBA, Arduino Software (IDE), LabVIEW.
Electrical Design: Analog Conditioning, Noise Reduction, Digital Logic Design, Sensor Selection, User Interface Design
Mechanical Design: Degrees of Freedom, Couple Curve Analysis, Cam Linkage Design, Link Kinetics
Fluid Mechanics: Fluid Kinematics, Bernoulli Equations, Conservation Analysis, Dimensional Analysis
Thermodynamics: Heat Engine Design, Refrigeration, Carnot Cycle, Otto Cycle, Rankine Cycle, Isentropic Processes
Dynamics: PID Controls, Root Locus Design, Nyquist & Bode Analysis, Eigen Analysis, Laplace Transforms
Material Mechanics: Stress Strain Analysis, Beam Deflection, Pressure Vessel Analysis, Stress Strain Transformation
Instruments: Mill, Lathe, Band Saw, Band Sander, Soldering Iron, Oscilloscope

Work Experience

Metric Engineering, Inc. | Miami, FL June 2014- August 2014, June 2015- August 2015

Roadway Design and Drafting Intern

- Forecasted construction expenses for proposed designs by analyzing past project data using MicroStation and Excel.
- Calculated flow rates to optimize roadway drainage designs to achieve industry standards.
- Simplified engineering design drawings to generate clear project overviews for customer review and project bids.
- Planned roadway traffic signage and pavement marking design in MicroStation.

Media Relations Group, LCC | Miami, FL June 2013 – August 2013

Public Communications Intern

- Notified citizens within affect roadway construction areas by placing phone calls and preparing fliers.
- Produced presentable material to assist in public outreach and project bids.

Technical Projects

Braille Smartwatch Prototype **Fall 2017**

- Conducted the research, design, machining, and experimentation of a braille smartwatch prototype product.
- Modeled a peak detection circuit capable sensing human contact in LTSplice and assembled with an Arduino./ n
- Designed the mechanical system in Creo to focus on part reduction, ease of assembly, and size reduction.
- Implemented C code capable of sensor self-calibration and compensation for environmental disturbances.

Obstacle Detection Robot Prototype **Spring 2017**

- Combined hardware knowledge, 3D printing, and software development to prototype a scanning device and install the device on a robot, granting 360 degree situational awareness, obstacle detection, and generate appropriate responses.
- Developed a comprehensive I/O interface with basic switches, buttons, and a LCD display for simple navigation through menus, giving individuals simple access to complex orders.

Autonomous Palm Trimming Robot Design Project Lead **Spring 2017**

- Led 6 students to create in depth conceptual plans considering many elements from design for assembly to end of life.
- Performed as the team's representative in all client based interactions for information gathering of the potential market.
- Created detailed risk assessments of multiple proposed designs to ensure intelligent finalized designs.

Low Power Autonomous Hack Saw Prototype **Spring 2017**

- Coordinated with two other students to design, prototype, and optimize a system to cut steel with 4 AA batteries.
- Designed a gear train to apply the desired output velocity and torque, all with a considered factor of safety.
- Completed detailed system stress, strain analysis considering concentration points and critical load points.