Glyn Han

Electrical Engineer

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I am an engaged team player who enjoys solving complex problems and testing and validating various systems. I am a great candidate for excellent documentation, who is also meticulous with my work.

Education

Bachelor of Applied Science in Electrical Engineering Sep 2012 – Apr 2018 (expected)
University of British Columbia, Vancouver BC

- Completion of EE with Co-op program (16-month)
- Involvement: UBC Aero Design | IEEE, Student Member

Skills

- Failure/root cause analysis
- AC / DC circuit testing
- Oscilloscope
- Signal Generator
- Prototyping
- Solidworks CAD
- VHDL / Hardware Design
- R / MATLAB / Simulink
- Multisim/PSIM/Circuit Maker
- HSpice / Cadence
- C / 8051 Assembly
- Machine shop
- Conversational Mandarin
- Hands-on skills
- Strong attention to detail

Experience

Tesla, Inc. May 2016 – Dec 2016
Quality Engineer Intern – Powertrain Electrics

- Supported the production and field level quality of the Gen3 Charger; a complex, high powered electromechanical assembly
- Assisted in decreasing overall Gen3 charger defects below year end goal 2-3 months ahead
- Investigated and organized board level electrical failure analysis on international chargers
- Conducted problem solving activities on specific issues (including setting up/executing experiments to find or confirm root cause)
- Developed, documented, and standardized diagnostic/testing procedures, and experiments
- Collaborated with multidisciplinary teams to identify and prevent electrical/mechanical defects pertaining to assembly, AC, and Supercharging

Rokstad Power Corp. Sep 2015 – Apr 2016
Project Estimator Intern – Customer Engagement

- Analyzed and developed job documents including Request For Quotations (RFQ), Request For Tender (RFT), Request For Proposals (RFP), and Prequalification Forms
- Developed quantity metrics and cost analysis for labor, equipment, and procurement for high voltage transmission project proposals

Project Manager/Quality Intern – Southern AB Transmission (Altalink)

- Developed an excel bill of materials (BoM) – approx. $10M 138kV transmission line project
- Validated site materials with BoM and tended to missing items; decreasing risk and delays
- Confirmed and signed off on verification of quality standards on over 80 steel monopole assembly components; cutting evaluation time by ~50%

Projects

Capstone Project – Digital Glass (Client: UBC Studios) Sep 2017 – Apr 2018 (Expected)
Consumer Product - Project Manager/Electrical Hardware Engineer

- Team representative to meeting weekly with project updates at EML (Emerging Media Labs), in charge of Minutes of Meetings and work delegation to keep organized
- Design and improve current Lightboard (instructional platform) by developing a digital writing tool with user interfacing and to eliminate the need for expensive specialized glass
- Develop and pitch a technical proposal with design, validation, and requirement documents

Tele-Operated Master/Slave Robot Arm Jan 2015 – Apr 2015
Solidworks & Machine Shop Design

- Designed and constructed a brush DC motor from the ground up meeting minimum requirement of < 1A starting current. This was made out of 3d printed commutators and with water jet cut steel laminations
- Developed a planetary gear system with a 1:64 gear ratio which cut the motors speed from >1000RPM down to 16RPM which increased the torque
- Constructed a 5-bar configuration robotic arm system complete with a base, platform, 4 aluminum arms, 2 actuators (slave output) and a ~1:4 size 3d printed model of a master arm to send the input

Apache Flight Control System Sep 2014 – Nov 2014
MATLAB/SIMULINK Control System Design

- Developed a PID Controller capable of controlling and stabilizing a simulated Apache Helicopter that utilizes electrical main and tail rotors
- Designed and adjusted PID gains capable of handling the marginally stable helicopter system modelled by block diagrams on Simulink
- Determined transfer functions of the helicopter and used control theory such as root locus and Nyquist criterion to analyze stability of the modelled system, resulting in a stable system with only 7.08% error

Pong Game May 2014 – Jun 2014
VHDL Modeling on FPGA

- Developed an FPGA Pong Game using VHDL on the Altera DE2 board
- Generated the pixel field in which each player controls 1 paddle, and have top and bottom boarders that deflecting the 'puck'
- Included an extra feature where the game constantly speeds up to increase the difficulty of the game over time; received 10% bonus

Electromagnetic Tether Robot Feb 2014 – Apr 2014
MOSFET Differential H-Bridge Motor Control

- Developed a microcontroller-based, battery operated electromagnetic tether robot capable of following user's controller
- Designed motor system controlled by a MOSFET differential circuit H-bridge configuration along with magnetic transmitters using ferrite inductors in RLC

Reflow Oven Controller Jan 2014 – Feb 2014
Temperature Sensor Circuit Design

- Developed temperature sensor for an oven controller able to reflow solder any custom PCBs.
- Designed and soldered a PCB board for LM355 temperature sensor, door sensor, and k-type thermocouple wires.

VOLUNTEERING

Engineering Faculty Group Leader Sep 2013
The University of British Columbia

- Developed interpersonal skills by leading a group of new students around campus, touring the group around the UBC campus to highlight UBC life and culture

House Floor Representative Sep 2012 – Apr 2013
Tec De Monterrey UBC Residence

- Developed team skills in the house council and interactive skills with the houses' residences
- Managed and organized all the house events as part of the house council organized floor events with a fellow Floor Representative

INTERESTS

- Cooking
- Photography
- Cars
- Swimming
- Fishing
- Hiking
- Gaming
- New Technologies