Kayleen Welch

Electrical Engineer

1-413-579-2632

kleen2797@gmail.com

Electrical Engineering Technology *BS Rochester Institute of Technology*

kleen2797.github.io/Portfolio-Site/

Available Full Time Summer 2022

Work Experience

IEC Electronics - Design Engineer / Newark NY May 2021 - Feb 2022

Part of a small team, responsible for all aspects of building client's testing equipment. Designed, built, tested and installed several large PCBs and designed and built interfacing cables for client boards, instruments, and in-house testing equipment. Documented designs and system functionality to ISO and ITAR auditing standards, and participated in design reviews for IPC compliance. Additional responsibilities included guiding co-op student work and problem solving for in-house board assembly facilities as required

UR Laser Lab for Energetics - Electrical Engineering Co-op / Rochester NY Jan 2019 - Mar 2020

Worked as a Research & Lab Engineer for the Electrical Engineering Department on projects in various areas from Controls to Measurement tools. Successfully followed projects from design to fabrication, testing and analysis, and implementation

RIT Lab Assistant / Rochester NY Aug 2018 - May 2019

TA for two sections each of DC Circuits and Electronics 1 Labs; assist with equipment issues & technical questions and signing off on correct circuit functionality

Technical skills

Solder certified IPC-A-610
Schematic Design & Analysis
Breadboard & bench tools:
AWG | Oscilloscope
Spectrum Analyzer
Mechanical benchtop tools

Software

Altium
C/C++ | Arduino
MATLAB | Multisim
Modelsim
Draftsight | Teamcenter NX
MicrosoftOffice Suite & Visio
HTML/CSS

Relevant Courses

Transmission Lines | Controls Systems | Electronic Machines & Transformers | DC & AC Circuits | Electronics I & II | Signals, Systems & Transforms | Photovoltaic Systems | Digital Systems I & II | Communications Electronics | Digital Signal Processing | Microelectronic Design & Fabrication | Engineering Econ & PM | Calculus I, II, Diff Eq | Chemistry | Physics

Relevant Labs

Transmission Lines - Simulated, tested and explored signal behavior and uses of lossy and lossless transmission lines
Communications Electronics - Design, analyze and build components of communications systems, including active and passive filtering, AM and FM modulation, Oscillation and Amplification
Electronics I & II - Designed, built, simulated, and analyzed advanced networks utilizing semiconductor devices: diodes, BJT, & chip Op-Amp circuits
Microelectronic Design & Fabrication - Designed and Fabricated NPN transistor and resistor network in a Class 1000 Cleanroom Lab
Controls Systems - Design test and build self balancing robot arm utilizing classical controls principals and iterative design
Digital Signal Processing - Optimization of Analog signals by building a digital signal processing filter on a Microprocessor, and documentation in IEEE standard format
Signals, Systems & Transforms - Utilize Matlab software to derive and prove Transfer functions, Time domain and Frequency Domain Analysis
DC & AC Circuits - Designed, built, simulated and analyzed various AC and DC circuits to prove fundamental principles of Electronic Engineering
Electronic Machines & Transformers - Built & Analyzed 3-Phase Networks
Digital Systems I & II - Designed and Simulated various Logic Networks
Microcontroller Systems - Wrote programs to operate Arduino robot using Atmega328p Microprocessor and Arduino IDE
Computational Problem Solving - Used C++ to create programs to accomplish a variety of tasks using arrays, vectors, sorts, and C++ library functions

Projects

Women in Technology member Assists with community outreach, participates in meetings,team building exercises and outings. (2018-present)

Hotwheelz Formula Hybrid SAE Electrical team member; designed and built GLV system on all electric Formula One car; placed 3rd at nationals (2015-2016)