Richard Heidrick   **October 2020**

  Email: ricky.heidrick@gmail.com
  Cell: 949.416.4812   3020 NW Orchard Ave

EDUCATION

Oregon State University – Corvallis, OR **GPA: 3.0**	**Theta Chi Fraternity** – Oregon State University
B.S. Electrical/Computer Engineering – June 2022	Vice President of Health and Safety – 2018
Tesoro High School – Las Flores, CA **GPA: 3.5**	Alumni Advisory Board Member – 2017
September 2012 – June 2016	

SKILLS

Organized
Fast Learner
Works Well Under Pressure
Excellent Problem Solver
Team Player

WORK EXPERIENCE

Gale Technologies   **New York, NY**
*Electronics Engineer Intern – **Full -Time Internship (Paid)***   April 2020 to Present
Integrated Circuit Design/Analysis | Voltage Transformation | High Frequency/High Voltage Pulse Power | Signal Processing | Power Regulation | Electromagnetics | Silicon-based Circuit Components | Trouble-Shoot Designs | Data Sheet Analysis | RLC Parallel/Series Circuit Resonance | Circuit Diagram Design Drafting | Jira Project Management Software Tools | Work Ticket Tracking Circuit Designs | Collaborative Local/Remote Engineering R&D |

- Worked directly with founder of Gale Technologies for a funded startup research electrical engineering project to create high voltage high frequency pulse power resonant applications, studied water as a dielectric capacitor used for alternative hydrolysis methods to create combustible HHO gas as an alternative energy source for industry
- Created initial frequency generator circuit the GH-1FG, researched previous circuit designs, sourced IC components, assembled IC pin connections with all other components, created voltage power regulator source, integrated pulse width modulation using variable resistance, analyze/optimize signal processes with oscilloscope
- Used a Siglent 4-channel oscilloscope to view various signals created around circuit designs for measuring signal frequencies, square wave duty cycles, voltage changes, marked trigger points, saved photo prints of key signal images, oscilloscope images were tagged and tracked along side Jira work tickets, created proprietary circuit language format to list probe points among all working designs
- Reviewed electromagnetic principles DC to AC step up transformers, sourced ferrite cores, analyzed coated magnet wire gauge, studied various electromagnetic effects of turn ratios
- Created all parts by hand RLC step up voltage circuit using UR ferrite core, wound/tested turn counts of wire bobbin coils, implemented all permutations of coil magnetic configurations, soldered 30 gauge magnet wire to jumper wires to help implement changing circuit designs
- High frequency high voltage amplification to achieve hydrogen oxygen disassociation of water (i.e. hydrolysis), created various water capacitors using water as a dielectric liquid
- Used AC Variac as a variable high amplifying voltage source (5V-50V AC), used soldering skill sets to create a protoboard with multiple capacitors and a full-bridge rectifier to produce an AC to DC signal converter, implemented a NPN BJT orientation to take a high power input and produce high gain output into a step-up transformer
- Created Arduino.ino script to simulate the GH-1FG circuit, created software that converted the analog potentiometer signal into a linear interpolation floating point scale, connected Arduino to voltage amplifier circuit to control higher voltage/frequency applications
- Used Jira project management software to create complete and submit work tickets to accomplish project goals, used tickets to keep track and organize changes in circuit designs and applications, integrated Jira and remote Github source code to upload and integrate Arduino scripts for the company

Oregon State University   **Corvallis, OR**
*START Leader (Won 2019 Leader of the Year Award) – **Full -Time Summer Job (Paid)***   Summer2018, 2019
- Every week our staff onboarded incoming freshmen students and their families to integrate them into OSU successfully
- Scheduled public speaking conference presentations to the students and families regarding first-year challenges/expectations
- Finalized student schedules, moved students into their residence halls, organized administration financial paperwork
- Led organized tours to introduce families to the various campus buildings and provided information for student resources

Premier Aquatics   **Aliso Viejo, CA**
*Lifeguard – **Full-Time Summer Job***   Summer 2017
- Managed a safe and secure pool by enforcing rules and procedures
- Provided customer service to all pool patrons by having a positive attitude and answering their questions
- Maintain the pool temperature and chemical balance when opening and closing pool vicinities
- Ran daily cleanliness and safety inspections