Jacob S. Watts

CONTACT INFORMATION

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2925 Van Buren Avenue
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United States

EDUCATION

Weber State University, Ogden, UT — Aug 2017 - Present
BS Electrical Engineering (GPA - 3.53)

Davis Applied Technology College, Kaysville, UT — Summer 2014-2020
Welding Technology - GTAW, GMAW, PAC, CAC-A, Oxy-fuel
Proficient with fabrication drawings and AWS welding symbols

TECHNICAL SKILLS

Programming Languages: Python, C, C++, VHDL, GitHub, LabView, Multisim

PROFESSIONAL EXPERIENCE

MicroGEM International PLC, Ogden, UT — Aug 2021 - Nov 2022
Electrical Engineer

- Created a Windows application for creating, validating, and constructing .csv files for use with NetJet (Kirk-Rudy) addressing system which reduced downtime and waste due to incorrect data management
- Ensured accuracy of fluid and powder dispensing – Calibrated and validated instruments and control mechanisms
- Focused on improving all aspects of existing automation as well as developing new automation equipment and controls integration optimization

Air Force Nuclear Weapons Center, Hill AFB, UT — May 2021 - Aug 2021
Electrical Engineer Intern

- Verified changes made to technical drawings
- Organized tours to the Strategic Missile Integration Complex (SMIC) and Little Mountian Test Facility (LMTF) for members of the Air Force Nuclear Weapons Center (AFNWC) Grounds Electrical team

Aerotech Manufacturing INC, North Salt Lake, UT — Jun 2020 - Aug 2020
Gas Tungsten Arc Welder(TIG)

- Manufactured metal parts for various companies according to ISO 9001-2015 standards
- Certified 3G AWS Standards in stainless steel, aluminum and carbon steel
- Certified forklift operator

Capstone Nutrition, Ogden, UT — Sept 2019 - Apr 2020
LEAN Manufacturing Engineer Intern

- Incorporated 5S methodology and LEAN production techniques to increase efficiency
- Created lesson plans for each piece of equipment to help train employees
- Assisted in T.A.B. (Think, Act, be Better) reports
- Reduced "change over" time from 4.5 hr to 1.5 hr

Gas Tungsten Arc Welder(TIG)

- Assembled and joined aluminum and steel parts according to specified drawings and ISO 9001-2015 standards
- Operated punching, laser cutting and forming equipment

PERSONAL PROJECTS

TTL Digital Clock, Ogden, UT Sept 2020 - Jan 2021

- Designed, prototyped, and built a fully functioning 12 hr digital clock with AM/PM indicator. Uses only 7400-series TTL Logic Gates along with two (2) CD4060BE ripple-carry binary counters for clock pulse
- Simulated design using Multisim and prototyped using a breadboard
- Produced professional quality printed circuit boards using EasyEDA web-based circuit design software
- Constructed, tested, and debugged circuit using multimeter, function generator, and oscilloscope

Decoded NOAA Satellite Data Using SDR Receiver, Bountiful, UT Jun 2020 - Aug 2020

- Used a USB RTL Software defined radio to capture passing NOAA 17,18,19 weather satellite data
- Constructed a Double Cross downlink antenna to increase reception of passing weather satellites
- Used SDR-Sharp, WXtoImg, and Orbitron software to receive, track, and decode the various satellite data

Perplexus Epic Computer Controlled Robot, Bountiful, UT Jan 2020 - Aug 2020

- Designed and built a computer controlled solver for the Perplexus Epic 3D Puzzle Maze Game
- Used T-Slot extruded aluminium for structure of the robot and two (2) Nema 17 stepper motors for the roll and yaw movements
- Used Python, C, Candle, and CNC programs to tell the robot where to move
- Actively working on making the robot move in a more efficient manner

PROFESSIONAL MEMBERSHIPS AND LICENCES

Institute of Electrical and Electronics Engineers Mar 2021 - Present

- IEEE Member
- IEEE Antennas and Propagation Society Member

Amateur Radio Operator Apr 2021 - Present

Licensed Technician

- Call sign - KJ7WME