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Daksh A. Patel

Summary

Daksh is an enthusiastic, creative team player ready to tackle immediate challenges that utilize software and/or hardware components with technology-driven organization. Able to thrive in an environment that encourages innovative thinking, recognition, and career development.

Experience Highlights

Feb 2019 - Present **Instrumentation and Controls EIT, Worley Canada Services Ltd, Kincardine, Canada**

Turbine Control Systems Project, Bruce Power

- Produce and maintain extensive Master Equipment List spreadsheet for tracking field instrumentation, managing changes and upload into Bruce Power database as per scope of work
- Revised Elemental Wiring Diagrams (EWDs)
- Verification of On-Line Wiring, Cable Block Diagrams, Connection Wiring Diagrams, Master Document List and Instrument Data Sheets
- Worked on Passport, COGNOS report preparation, Action Requests, document number requests and organization
- Providing valuable engineering related services to customer following precise procedures and standards
- Site visits for field checking controls instruments (i.e. flow transmitters, level transmitters, valves)

2016 – 2018 **Various Positions, Freelance**

Hack The 6ix Hackathon (Aug 2018 – Aug 2018)

Devpost Project Title: Surround Sound

- Automatic playlist creator based on the specified location and the people inside of it
- Developed using JavaScript, React-Native, MongoDB, Express JS, Passport JS, Node JS
- GPS location scanning, Spotify Authentication, Playlist management were worked on

Autonomous Multi-Sensor Information Fusion (Nov 2017 – Aug 2018)

Sounding Rocket Payload Final Year Capstone Project

Roles: Electrical Team Lead

- Developed a payload to be a datalogger for the flight of a sounding rocket to reach 10,000ft
- Analyze and display the collected information in a meaningful way
- Large datasets, SQL database, NodeJS, PHP, Django, Web Frameworks, ChartJS, JSON
- Work consisted of designing and implementing the payload
- Programming in C++ and Python for the Arduino and Raspberry Pi boards, respectively
- Custom designed PCBs to fit size requirements
- Communicated with the team, scheduled tasks and overlooked all aspects of the projects

FPGA Communications (Jan 2018 – Mar 2018)

Embedded Systems Design

- Implement a differential function at the gate level in VHDL with attempt in Verilog
- Implemented communication from FPGA to Arduino for mathematical function in VHDL

Go-Back-N Protocol Python (Feb 2018 – Mar 2018)

Computer Communications

- Implement the Go-Back-N Protocol in Python using Client and Server in Socket

CPU Cache Simulator (Feb 2018 – Mar 2018)

Digital Computer Architecture

- Designed a level one cache simulator using Python for large data sets
- Implementing least recently used and write back methods

MIPS CPU Verilog (Jan 2018 – Feb 2018)

Digital Computer Architecture

- Implement MIPS CPU design in Verilog using Quartus Prime
- Implement 5 Stage Pipelining CPU of MIPS architecture

ALU (Sept 2016 – Dec 2016)

Digital Logic Design II

- Developed an Arithmetic Logical Unit to perform 25 arithmetic functions
- Utilized Quartus Prime and ModelSim for programming in VHDL

4bit and 6bit RISC CPU (May 2016 – Aug 2016)

Microprocessors

- Designed and simulated a 6bit CPU using RISC architecture inside of Logism
- Implemented an ALU with 15 operations using hexadecimal operation codes

2015 to 2015 **Technical Consultant, Sutherland Global Services, Windsor, Ontario (May 2015 to Aug 2015)**

Roles: Technical Consultant

- Identify, research and resolve technical customer issues as trained
- Document customer notes, reports and logs in real time communication with customer
- Met client contractual goals and metrics with regards to providing excellent service

Computer Skills

- *Design Software*: AutoCAD, Bluebeam Revu, Matlab/Simulink, EMPro, OrCad, LTSpice, PSpice, TINA, Altera Quartus/ModelSim, Unity, Godot, Unreal Engine
- *Programming*: C++, C#, JavaScript, Python, Django, NodeJS, MEAN/MERN, Web Dev, Verilog, VHDL, Assembly
- *Hardware*: Embedded Systems, FPGA, Raspberry Pi, Arduino, Serial Comms, Version Control
- *Operating Systems*: LINUX, Windows, Android, UnRAID
- *Design Software*: Capture One Pro, DaVinci Resolve, Premiere Pro, After Effects, Lightroom, Photoshop
- *Microsoft Office*: Word Processing, Advanced Spreadsheets, Database, Presentations

Soft Skills

- Designing, prototyping, and assembling electronics
- Strong analytic, interpretive and, presentation abilities
- Strong interpersonal, verbal and written communication skills.

Education

2013 to 2018 **Bachelor of Applied Science Honours Electrical Engineering, University of Windsor, Windsor, Ontario (Sept 2013 to Oct 2018)**

Engineering knowledge includes AC and DC circuit analysis, control systems, object-oriented programming, embedded systems design and applications of quality control using statistics.