KETAN DESAI

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SUMMARY OF QUALIFICATIONS

- Proficient at **circuit design** and **PCB design** using **Altium Designer, KiCad and LTSpice**
- Electrical design and firmware implementation of communication protocols such as **I^2C**, **SPI**, **UART** and **CAN**
- Practical experience with **lab equipment** and **prototyping tools**, including oscilloscope, function generator, spectrum analyzer, soldering equipment, and 3D printer
- Experience with **RF** design, **MCU** and **FPGA** bring-up

TECHNICAL WORK EXPERIENCE

Sierra Wireless **January 2020 – September 2020**
Hardware Engineer
- Completed design tasks, PCB assembly and testing to improve future development revisions
- Performed automotive standards and ESD testing, determining failure points to ensure regulatory compliance
- Worked with OrCAD to design and test PCBs to ensure better manufacturing yields

Microchip Technology **September 2019 – December 2019**
Product Design Engineer
- Wrote and tested SystemVerilog to monitor internal performance of an integrated circuit
- Developed high-speed buffers for a next generation PCI-Express application to improve device performance
- Performed verification to ensure timing criteria were met

Canadian Space Agency/UBC Electrical and Computer Engineering **April 2019 – August 2019**
ORCASAT RF Co-op
- Created designs and tests for an RF transceiver to facilitate communications with the ORCASat CubeSat
- Fabricated and tested a PCB based off these designs to meet the project requirements
- Worked with RF lab equipment to perform antenna matching and filter tuning

TECHNICAL PROJECTS

Ultra-Fast Failure Test Unit, University Capstone Project **September 2020 – Present**
- Lead a team of four to design a system for the acquisition of high-speed data to facilitate research on transistor healing
- Designed a 6-Layer PCB with an FPGA, DDR3 memory and high-speed ADCs to achieve sample rates of 1GSPS
- Maintained a project management plan to ensure feasible timeline and accurate budget projection

UBC Orbit Central Data Handling, University Student Team **September 2018 – Present**
- Performed schematic capture, component selection, and PCB layout using Altium for a CubeSat
- Worked with various MCUs, sensors and power converters for low power, high reliability systems
- Managed version control using Git and SVN to facilitate team collaboration

ESP32-S2-INK, Personal **December 2020 – December 2020**
- Implemented a development board as an open-source design, allowing low power access to the internet via Wi-Fi
- Used Altium Designer to create a 6-Layer design with a focus on minimizing size and maximizing feature set
- Performed high density RF design in a constrained time frame to challenge myself and expand my skillset

Near Field Probes, Personal **June 2020 – July 2020**
- Produced a pair of probes to allow near field testing of EMC related issues
- Included high performance amplifier to provide monolithic solution
- Optimized design for manufacturability to minimize fabrication costs

EDUCATION

University of British Columbia **Expected Graduation May 2021**
Bachelor of Applied Science - Electrical Engineering with Co-op