Viraj Khatri

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OBJECTIVE

Graduate Architecture Intern at Hillsboro or Santa Clara

EDUCATION

- **Portland State University**   Portland, OR
  M.Sc Electrical and Computer Engineering, - / 4.0   *Fall 2021 – Spring 2023*
    - **Relevant Courses**:
        * **ECE 581**: ASIC Modelling and Synthesis (Dr. Xaiyou Song - Fall 2021
        * **ECE 585**: Microprocessor System Design (Mark Faust) - Fall 2021
        * **(tentative) ECE 586** : Computer Architecture (Mark Faust) - Winter 2022
        * **(tentative) ECE 587**: Advanced CompArch I (Yuchen Huang) - Spring 2022
        * **(tentative) ECE 588**: Advanced CompArch II (Yuchen Huang) - Fall 2022
- **College of Engineering, Pune**   Pune, Maharashtra, India
  B.Tech Electronics and Telecommunication Engineering, 3.2 / 4.0 (7.99/10)   *May 2015 – June 2019*

EXPERIENCE

- **Tejas Networks**   Mumbai, Maharashtra, India
  Research and Development Engineer   *August 2019 - August 2021*
    - **Networking Technologies**: Working with DHCP, VLAN tagged Traffic management, VPNs, Downstream Ingress Bandwidth, HQOS queuing, Traffic Shaping Profiles, etc.
    - **C/C++**: The software used for configuring switching capabilities of a network card is largely based in C for device drivers and C++ for higher level UI.
    - **Feature Development**: Implemented Zero Touch In-Band Management feature request by Tejas Network's client with inputs from the Sales team and feedback from QA team.
    - **Python**: Extensive scripting to trivialize monotonous commands with flexibility to adapt to situations.
    - **Training**: Trained new recruits to the team and enabled them to contribute meaningfully.
    - **SQL**: Switching Configuration stored on the network cards is in a database, which needs to be created , updated, or re-played onto the hardware as required.
- **DOT Sys Technologies**   Mumbai, Maharashtra, India
  Design Intern   *May 2018 - August 2018*
    - **Transistor Theory**: Implemented Pulse Width Modulation to control voltage and current levels to make a programmable power supply within the constrains of Transistor hardware.
    - **Power Electronics**: Used loose capacitors, inductions and Transformers to convert main lines supply to transistor switching compatible levels.
    - **Arduino**: Made a Programmable Battery Charger with UI implemented on Arduino + Transistor Theory and Power Electronics to manage the charging functionality.
- **Eduvance**   Mumabai, Maharashtra, India
  Intern (B.Tech. project - Smart Paper Tracking System)   *May 2017 - January 2018*
    - **IoT**: Used RPi to collect data from devices via Bluetooth and IBM cloud services to implement data storage, sync, and decision making on cloud
    - **Bluetooth**: Used Cypress Semiconductors PSOC4-BLE boards as portable markers to be attached to files to track them and provide information to RPi for syncing.

PROJECTS

- **hamming_code**: Asynchronous Hamming Encoder and Decoder in System Verilog.
- **fifo**: Parameterized fifo with no handshaking protocols for outgoing communication.
- **i2c**: I2C master and slave implemented in Verilog, currently re-writing code in to System Verilog.
- **ffind**: Small wrapper for find command in linux to make it accept grep-like arguments. Written in golang and rust.
- **Music-Player-GO**: Feature Contributions to open source Music Player app. Written in kotlin.

PERSONAL PUBLICATIONS

- **Modified MD5 Algorithm for Low-End IoT Edge Devices.**: Viraj Khatri, Dr. Vanita Agarwal. ICCCNT2019