Govind Sunilkumar

Aspiring Digital Electronics Engineer

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Education

Masters of Science in Computer Engineering **Aug 2023 - Dec 2024**
Virginia Tech, Blacksburg *CGPA: 4.0*

B.Tech in Electronics and Communication Engineering **Sep 2017 - May 2021**
National Insititute of Technology, Karnataka *CGPA: 7.35/10*

Professional Experience

RTL Systems Design Intern, Skyworks Solutions, Austin **May 2024 - Aug 2024**

- Designed Skyworks proprietary communication protocol test driver on Zynq ZCU 102 **FPGA**, used **Vivado** flow to generate bit stream and **VBScript** to test driver on PetaLinux Environment
- Executed **Silicon Post-Validation** tests on prototype test chip for Skyworks Solutions

Embedded Hardware Engineer, Bharat Electronics Limited, Bangalore **Oct 2021 - Jun 2023**

- Designed and Tested Microchip PIC **microcontroller** based Display System for aerospace applications using **OrCAD**
- Tested with **I2C** interface and developed **Embedded C** code that would communicate with board
- Designed and Tested 24v down-converted circuit board for laser positioning system

Projects

Design 12 bit Multiplier logic and layout **Nov 2023**

- Designed a novel 12x12 **Vedic multiplier** using stackable carry look-ahead adders for decreased area and delay.
- Utilized **Cadence Virtuoso 45nm PDK** for schematic design and layout.
- Estimated performance increase using **ADEP** metrics
- Achieved a **25%** reduction from commonly used booth multiplier for unsigned multiplication

Technical Skills

Programming: System Verilog, VHDL, Visual Basic, Scala, Embedded C, Python, C++, Scala.

Software: OrCAD, Allegro, Vivado, Cadence Virtuoso.

Skills: Digital Design, Post Silicon Validation, Board Schematic Design and Testing, Physical Design and layout, RISC V Architecture.

Relevant Coursework

- Building a RISC V Core using TL-Verilog (EdX)
- Digital Design
- Modern Binary Exploitation
- Embedded RTOS
- Computer Architecture
- Digital Systems testing and verification
- VLSI IC Design
- Embedded with RISC V (Udemy)

Academics Accomplishments & Extracurricular

- **Graduate Teaching Assistant** at Virginia Tech, Subject : Applied Electrical Theory
- Received best Evaluator and best role taker award, **NITK Toastmasters Club** meeting, Oct 2019
- Participated in the Annual Speech contest of **Toastmasters International**, Mar 2020
- Served as the **Content Head** and executive member of **HackVerse Hackathon Organising team**, NITK 2020–21
- Served as the **Robotics head** of the Institution of Engineers,NITK 2020–21