Velicharla Gokul Kumar





EDUCATION

and Research

• Vignan's Foundation for Science Technology

AP, India 2019 - 2023

B. Tech in Electronics and Communication

Engineering; CGPA: 9.52/10.0

• Sri Chaitanya jr. College MPC; CGPA: 9.88/10.0

AP, India

2017 - 2019

Sri Chaitanya Techno School

SSC; GPA: 9.8/10.0

AP, India

2017

EXPERIENCE

• 5G Testbed R&D Lab, Indian Institute of Technology Hyderabad RTL and SoC System Design Engineer

TS, India Dec 2023 - present

o Implemented basic 5G NR Physical Layer (L1) Baseband hardware modules for the Synchronization Signal Block (SSB) channel.

- o Moderate-level C code developing for L1 and L1 Controller interactions on the PS, ensuring smooth hand-off and alignment with hardware requirements.
- o Worked with AXI bridges and interconnects between PS and PL, specifically in Intel FPGA.
- 5G Testbed R&D Lab, Indian Institute of Technology Hyderabad Research Project Intern

TS, India

Dec 2022 - Nov 2023

- o Reviewed and followed user guides for soft-core IP's and configured them effectively.
- o Digital Design Fixed-point implementation of signal processing techniques in HDL.
- o Jenkins, Docker integrating Jenkins with docker container agents for build & Automated Testing.
- O Quartus Prime Pro -compiling flow for Intel Agilex F-series, I-series, Hitek Boards with flashing using JTAG, Active Serial Modes with GUI, CLI.
- o Make, Tcl, Python, Shell -scripting, python wrappers for the compiling flow of EDA tools.
- Indian Institute of Technology Hyderabad

TS, India

Future Wireless Communications Intern

Aug 2022 - Nov 2022

- Synthesis, High level synthesis Digital design of basic communication modules using Vivado, Vitis, Vitis HLS, Matlab
- o Communications, Signal processing, Random variables -basics.
- o Configuring FPGA, ARM using Termux on Vaman board.
- O Matrix Analysis in python, Optimization using cvxpy, gradient ascent & descent.
- o Digital Design -using platformio, Arduino, IDF frameworks in Assembly, Avr-gcc level on Arduino board.

ACADEMIC PROJECTS

• Elderly Fall Detection and Location Tracing System:

Guide: Dr.V.Vijaya Raghavan Duration: 4-Months

• IoT Based Smart Governing System:

Guide: Dr.N.Usha Rani Duration: 4-Months

VOLOUNTEER EXPERIENCE

- IEEE Student Branch Secretary. -6 Months
- Class Representative -6 Months
- ullet Student Coordinator -3 Days
 - -CIRH International Conference.

CERTIFICATIONS

- Problem Solving Through Programming in C, NPTEL
- Programming, Data Structures and Algorithms Using Python, NPTEL
- Programming For Everybody (Getting Started with Python), Coursera
- Programming In Java, NPTEL
- Business English Certificate Vantage Overall score:159 CEFR Level: B1
- DevOps and Building Automation using Python, Coursera

AWARDS & HONORS

• Merit Certificate: Certificate of academic excellence (2020,2021)

EXTRA-CURRICULAR ACTIVITIES

• Sports: Volleyball, Badminton