Ram Venkat Narayanan

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I am a Graduate student at University of Cincinnati, majoring in Computer Engineering, interested in applying for a Teaching Assistant position based on my academic progress and completed coursework for the Spring 2022 semester.

EDUCATION

University of Cincinnati — **Aug 2020 – Present** — **CGPA – 4.0/4.0**
MS, Computer Engineering — Cincinnati, Ohio

- **Coursework**: Intro to VLSI Design, Trust in Digital Hardware, Operating Systems, VLSI Design for Test and Power, VLSI Design Automation, Topics of VLSI, Intro to Computer Architecture
- **Teaching Assistant**: Graduate teaching assistant for the courses Engineering Data Structures and Operating Systems

SASTRA University — **2014–2018** — **CGPA – 8.2/10**
B.Tech, Electronics and Communication Engineering — Thanjavur, India

LIST OF COURSES

EE courses:

Programming for ECE, Digital Design, Operating Systems, VLSI Design for Test and Power, VLSI Design Automation

CS courses:

Python Programming, Data Structures

TECHNOLOGIES AND LANGUAGES KNOWN

- Languages: Python, C, C++, VHDL, Verilog
- Technologies: HSPICE, ModelSim, Synopsys DC Compiler, Proteus 8 Professional, Magic, MATLAB, Visual Studio, Xilinx Vivado tools
- Hardware: Raspberry Pi, Arduino, STM32F4, ATMega8

PROJECTS

- Developed a **Placement and Routing Tool,** written in C++, that uses a Force directed algorithm for placement and a Channel routing algorithm to optimize routing wirelength
- Implemented a **Simulated Annealing** algorithm, written in C++, to perform circuit bi-partitioning to optimize interconnect wirelength
- Used Synopsys DC compiler to synthesize (for DFT) an RT-Level design and execute **Scan Chain insertion** and **BSD insertion**. Used Synopsys Power compiler to implement **Low power design** on the same RT-Level design
- Designed a chip that performs **18-bit string matching** with the help of ModelSim, MAGIC, HSpice and IRSIM tools
- Implemented a **Data Acquisition Device for Bat Echolocation** to simulate the echolocation property of bats**,** on a Raspberry Pi using multiple sensors and an STM32F4 board