Pratyay Gopal Reddy Rudravaram

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Education

University Of Illinois Urbana Champaign GPA: 3.72

Bachelor of Sciences in Computer Engineering - James Scholar Honors *Expected December 2026*

- **Relevant Coursework** : Computer Systems Engineering, Digital Logic, FPGA, Paralell Programming, Data Structures, Electronics, Analog Signal Processing, Linear Algebra, Discrete Math
- **Organizations** : SigArch, Department of ECE, IEEE, Association for Computing Machinery

Technical Skills

Languages: Java, C, C++, Python, Verilog, SystemVerilog, VHDL
Tools: Git, Docker, Raspberry Pi, Arduino, KICAD, ORCAD, PADS, Altera Quartus, Vivado Xilinx, FL Studio, VS Code, PyCharm, IntelliJ
Certifications: VMware Certified Professional (VCP-DCV), VCTA, AWS Solutions Architect – Associate, ISC2 CC
Misc: Linux, Virtualization, Bash, Pspice

Experience

Apollo Computing Laboratories June 2024 – August 2024

Hardware Design Intern *Hyderabad, India*

- Developed a power delivery board from concept to completion for high availability data-center applications.
- Working on programming FPGA boards deployed in mission critical infrastructure using Verilog and VHDL.
- Operated an automated SMD production line to assemble defense related PCBs.

Grainger College of Engineering, ECE January 2024 – Present

Course Staff (Digital Logic) *Urbana, IL*

- Assessed student assignments weekly and provided constructive feedback and handled regrade requests.
- Corrected rubrics for Digital Logic Design Homework problems that did not have streamlined solutions.
- Collaborated with ECE department faculty to develop a better homework structure to ensure faster grading.

Thermo Fisher Scientific May 2022 – June 2022

Embedded Engineering Intern *Hyderabad, India*

- Coded a Raspberry pi test-bench to calibrate a thermocouple for blood bank temperature regulation using python.
- Simulator was deployed to 10+ locations across India and was used to calibrate blood bank coolers for a lower cost
- Maintained and updated a spreadsheet of testing data for 100+ trials gathered from SPICE simulation.

Projects

FPGA Video Game Port | *Vivado, FPGA, SPI, HDMI*

- Ported a modified version of "Five Nights At Freddys" on a Spartan-7 based Urbana Board FPGA.
- Created all of the game logic and graphics running at 55 Hz through HDMI and utilizes 270kB of RAM.
- Optimized FPGA performance by reducing number of registers, BRAM, and LUTs required for design.
- Demoed at the invite only ECE 385 showcase due to the complexity of the project.

Power Delivery Board | *Orcad, PADS*

- Designed a server power delivery board to power storage bays using a server power supply.
- Used Orcad and PADS for design and layout and gained PCB design experience.
- Verified and tested the final board after manufacturing to ensure that it works as intended.

Breadboard Synth | *Falstad, Arduino, Oscilloscopes*

- Generated and Implemented 4 synth modules for a fully modular music synthesizer for the ECE198 Honors lab.
- Used Falstad for design and worked with electrical workbench tools for testing.
- Created an arduino testbench with 10+ modes to callibrate the tones notes.

Temperature Regulation Calibrator | *Raspberry Pi, Python, ADC/DAC*

- Built a proof of concept of an affordable, temperature calibrator using thermocouples and Raspberry Pi.
- Coded the functionality for calibrating the thermocouple using python and designed a circuit for the project.
- Ran 100+ simulations of the ADC/DAC and recorded data to ensure minimal variance in the output voltage.
- Github repo: https://github.com/pratyaygopal/Thermocouple-Simulator

Linux Migration | *Linux, Windows, Virtualization*

- Improved the performance, security and stability of 30 computers by upgrading Windows(7/XP) to Linux Mint.
- Created admin groups for privileged system access during computer based tests to monitor the students.