Jahnavi Ammineni

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PROFESSIONAL SUMMARY

I'm a dedicated Electrical Engineer with a Master's degree in Electrical Engineering, specializing in VLSI, and a Bachelor's in Electronics and Communication Engineering. I have strong skills in data engineering, machine learning, and embedded systems, and I've worked hands-on with tools like TensorFlow, PyTorch, and MATLAB. I'm known for my ability to lead projects and work well in teams to create innovative solutions. I'm passionate about using my technical skills to improve engineering workflows and achieve results. I'm also open to new opportunities and willing to relocate.

EDUCATION

University of Cincinnati, Cincinnati, OH **Aug 2023 - May 2025**
Master of Engineering in Electrical Engineering | VLSI Track
GPA: 3.24/4.00
DVR & Dr. HS MIC College of Technology, Andhra Pradesh, India **Aug 2019 – June 2023**
Bachelor of Technology in Electronics and Communication Engineering
GPA: 3.68/4.00
Coursework: Introduction to VLSI Design, Trust Digital Hardware, VLSI Design for Test & Power, VLSI Design Automation, Probability & Statistics, Innovation Design Thinking, VLSI Design, Analog IC Applications, Digital Systems, Control Systems, Embedded and Operating Systems, Microcontroller and Microprocessor, Problem-solving through C and Python, Data Structures Using C, OOPS through JAVA.
Honors: Received GIA Scholarship of $18,452 for the academic year 2023–2024

WORK EXPERIENCE

- **Data Engineer - Adisys Corporation,** Seattle, Washington D.C **Dec 2024 - Present**
  Collect, clean, and preprocess data from various sources to create high-quality datasets & collaborate with data engineers and data scientists to ensure data integrity and readiness for machine learning projects - Assist in designing, developing, and fine-tuning machine learning models using frameworks like TensorFlow, PyTorch, and Scikit-Learn & work alongside senior engineers and data scientists to implement and test advanced algorithms - Train machine learning models on large datasets, optimize hyperparameters for Peak Performance, and perform rigorous testing and validation to ensure the accuracy, robustness, and reliability of models - Identify and craft relevant features to enhance model performance and effectiveness.
- **Embedded Intern - Tevatron Technologies Pvt. Ltd.,** Noida, India **July 2022 - Aug 2022**
  Developed a Bluetooth-enabled light bulb system using STM32 microcontroller and BlueIO dongle for remote control - Jira managed the project to track the tasks and specifications documented in Confluence - Compilation using the GCC compiler, improved the firmware using C programming, and developed Python client application - Successful tests showed strong Bluetooth connectivity with Jima to manage agile projects.

SKILLS

Software Proficiency: AutoCAD, MATLAB
Programming languages: C, C++, Python, Arduino, VHDL, Verilog, System Verilog
Machine Learning Frameworks: TensorFlow, PyTorch, Scikit-learn
Embedded Systems: STM32
Simulation and Modeling Tools: ModelSIM, HSPICE, MAGIC Layout**,** Arduino IDE, Synopsys
Project Management Tools: Jira, Jima, Confluence, Trello

PROJECTS

- **Synthesis, Testing, Dual Level power Estimation, and Gate Optimization** **Jan 2024 – Apr 2024**
  Simulated and verified RTL design using Verilog in ModelSIM - Synthesized design in Design Compiler using 90nm library - Inserted scan chain and verified Boundary Scan Design using BSD Compiler - Performed ATPG and fault coverage analysis using TetraMAX - Verified switching activity - Implemented power gating and clock gating to optimize low power design using Power Compiler.
- **Placement and Routing Algorithms for EDA using C++** **Jan 2024 - Apr 2024**
  Performed complex netlist bi-partitioning using Simulated Annealing Algorithm in C++ - Optimized placement and routing of cells in netlists using Force Directed and Lee's Maze Routing Algorithm - Exported layout design in MAGIC file format - Routed 10 benchmarks with a maximum 1000 cells and 1000 netlists.
- **Hardware FIFO (First in First Out)** **Oct 2023 – Nov 2023**
  Using an ON 0.5µ N-well CMOS process with dimensions 1.5X1.5mm, a chip with FIFO functionality in the MAGIC layout was developed - Created a bit-sliced architecture n=60 length and pushing, popping out four bits at once - The results were verified using HSPICE Waveforms and cross-verified using the results generated by the ModelSIM using the VHDL code.
- **Arduino-Based 2D CNC Plotter** **Dec 2022 - Apr 2023**
  Developed a low-cost Arduino 2D CNC plotter with CD-ROM stepper motors for the X and Y axes and a pen for the Z axis for plotting a 4x4 cm sheet, Uploaded embedded C CNC software to execute GCtrl for axis plotting - I used Inkscape to convert graphical codes to a file with proper dimensions and fonts for plotting, as a group leader, I delegated work, communicated timelines, and established rules for accountability for three group members.

PUBLICATION

- Published a paper on this project at the International Journal of Creative Research Thoughts | ISSN:2320–2882, with 4 other people G.V.P. Chandra Sekhar Yadav, Shaik Nagulmeera, Syed Abdulla, and Thota Naveen Kumar.

CERTIFICATION

Cleanrooms · Semiconductor · Fabrication · Manufacturing · Chemical Safety

- OASIS RAPID Certification, University of Cincinnati, February 3, 2025, URL - https://www.credly.com/users/jahnavi-ammineni