

Arjun Hati

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SUMMARY

Computer Engineering(Electrical Engineering) student with 4+ years of experience in embedded software development, communication protocol and automotive stack implementation, seeking internship/Coop/Full-time opportunities in embedded software design.

EDUCATION

M.S. (GPA: 3.88) Expected May 2024

Arizona State University

Tempe, AZ

Core Courses: Computer Architecture II, Constructionist Approach to microprocessor Design, VLSI Design, Python for Rapid Engineering

B.Tech. (GPA: 8.86) May 2018

Maulana Abul Kalam Azad University of Technology

WB, India

Relevant Coursework: Analog Electronics, Digital Electronics, Microprocessor and Microcontroller

PROJECTS

- 7nm PDK FINFET device simulation in Synopsys Cadence
- RTL to GDS design of 2 bit full adder.
- RTL to GDS design of Graph Convolution network.
- Implementing GSelect branch predictor for ARM processor in gem5.
- Implementation of LRUIPV cache replacement policy for ARM processor in gem5.
- Design and simulation of different combinational and sequential circuits in System Verilog.
- Design and simulation of FIFO and LIFO circuits using System Verilog.
- Realization and Implementation of Optical Reversible Universal Quadruple Logic Gates and its simulation demo leveraging python

TECHNICAL SKILLS

- Programming Languages: Embedded C, Python, C, C++
- Embedded Systems: S32K144, MC9S12GA64, S32Design Studio, Code Composer Studio, VECor CANoe, PCAN, Cyclone Debugger, PE Micro Debugger.
- Modelling: System Verilog, CAPL Scripting, Cadence, Virtuoso, hspice simulation
- Analysis and Simulation Tool: Modelsim, MATLAB, gem5

PROFESSIONAL EXPERIENCE

Graduate Research Assistant

August 2022 - Present

Laboratory for Energy and Power Solutions, Arizona State University

Tempe, AZ

- Working on predictive modelling of microgrid systems
- Working in developing custom energy system simulation
- Integration and optimization approaches and solvers, updates to post processing calculations, automating configuration setup and simulations for common use cases.
- Development of new communication interfaces/APIs with third party software
- Working on vehicle integration in microgrid system.

Senior Embedded Software Developer

TVS Motor Company Limited

July 2018 - August 2022

Tamil Nadu, India

- Responsible for Implementation of Fast Charging(DC001)Communication Stack with Dual wire to Single Wire CAN conversion.
- Responsible for UDS Compliant boot-loader implementation for Vehicle Control Unit and setting up same facility in production line of supplier.
- Developed SDK-based memory partition and encryption key uploading methodology.
- Implementation of CAN, LIN, SPI and I2C communication protocols
- Part of dashboard development using Vector Canoe tool for simulation of vehicle operating conditions using DBC file

CERTIFICATIONS

- Received Functional Safety Certification Program (ISO26262) requirement for "Functional Safety certified Engineer" - Level I, TUV India Training Academy, Bangalore, May 2021
- Received Green Belt Certification, TVS Motor Company, Tamil Nadu, Sep 2020

RESEARCH PBLICATIONS

- Presented a Research paper on "Realization and Implementation of Optical Reversible Universal Quadruple Logic Gate (ORUQLG)" in the IEEE International Conference for Convergence in Engineering (ICCE 2020) organized by Netaji Subhash Engineering College, Kolkata, Sep 2021

EXTRACURRICULAR EXPERIENCE

Laboratory for Energy and Power Solutions, Mesa, AZ

August 2022 - Present

- Participated in conferences on microgrid design and analysis
- Attended Gurobi Optimization training