Arjun Nair

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Education

North Carolina State University — Raleigh, NC
Bachelor of Science in Computer Engineering, Bachelor of Science in Electrical Engineering — *Aug. 2019 – May 2023*

Relevant Coursework

- Computer Systems Programming • Data Structures and OOP for Computer Engineers • Introduction to Embedded Systems • Microelectronics • Fundamentals of Logic Design • Analytical Foundations of Electrical and Computer Engineering • Circuits and Systems • Introduction to Signals • Discrete Mathematics for Computer Scientists

Work Experience

Electrical Engineering Intern — May 2021 – Aug 2021
Edwards Vacuum (Atlas Copco Group) — *Chelmsford, MA*

- Collaborated with team members to build and test prototypes in collaboration with NPI projects
- Designed and printed circuit board schematics to be used in conjunction with numerous product lines
- Built test fixtures to perform Reliability Demonstration Testing on electrical sub-assemblies
- Performed Design Verification Testing (DVT) on various components and products using a variety of lab equipment

Projects

Embedded Systems Car | *Custom Car controlled by IOT that follows electric tape* — Aug 2021

* Soldered and programmed MSP-430 board in C to work in conjunction with 2 DC motors and on-board IR emitter and detector
* Implemented Pulse-Width-Modulation to control wheels using on-board clocks and timers
* Used IOT module to control car navigation via WiFi using a web interface
* Created H-Bridge board with pFETs and nFETs to allow forward and reverse control, along with power board consisting of 4 AA battery-pack

Practical Game Design | *Freshman Engineering Design Day (3rd Place)* — Nov 2019

* Designed a game body structure using SolidWorks
* Ported design to 3D printing machine to create a prototype and complete the product assembly
* Conducted user testing of the novel game to verify application, structural integrity, and feedback

Phantom Power Supply | *High School Music Department* — Sep 2018

* Designed and built a Phantom Power Supply to power cardioid microphones
* Developed an integrated circuit, populated PCB with discrete components, and tested the product for functionality

Technical Skills

Languages: C/C++, Python, Verilog, VHDL, Assembly, MATLAB, HTML
Circuit Design: Altium Designer, PSpice, Logic Design, Soldering, Verification Testing, SolidWorks
Misc: Microsoft Word, Microsoft Excel, Adobe Photoshop