Arjun Nair

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EDUCATION

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

Relevant Coursework
- Digital System Design in Verilog • Computer Systems Programming • Data Structures and OOP for Computer Engineers • Embedded Systems • Physics of 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

Intel Corp.   May 2022 - Present
Package Design Intern   *Chandler, AZ*
- ∗ Incoming intern for Summer 2022

Edwards Vacuum (Atlas Copco Group)   May 2021 – Aug 2021
Electrical Engineering Intern   *Chelmsford, MA*
- ∗ **Designed** and printed circuit board **schematics** to be used in conjunction with **12 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

Autonomous Car Controlled by IOT | *Custom Car controlled by IOT that autonomously 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** and **modelled** motor characteristics in **MATLAB**
- ∗ Used **IOT** module to control car navigation via **WiFi** using a **custom** web interface using **UDP protocol**
- ∗ Created H-Bridge board with pFETs and nFETs to allow forward and reverse control, along with power board consisting of 4 AA battery-pack
- ∗ Developed **Python script** to handle incoming packets and allow users to control the car using WASD and game controllers over WiFi

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, Git, Assembly, MATLAB, HTML
Circuit Design: Altium Designer, PSpice, Logic Design, Soldering, Verification Testing, SolidWorks
Misc: Microsoft Word, Microsoft Excel, Adobe Photoshop

ACTIVITIES

IEEE at NCSU (Member)   Jan 2022 - Present

Rock Climbing Club (Member)   Aug 2021 - Present

NCSU ESports Club (Varsity Team)   Aug 2019 - Present