

# AMARNATH S. PATEL

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## EDUCATION

### University of Central Florida

Undergraduate Student

Electrical Engineering, Photonics Science and Engineering, Computational Physics August 2025 - Present

- Relevant Coursework: Geometric Optics

### Florida Atlantic University

3.65 GPA

Computer Science coursework - High School Diploma

August 2021 - May 2025

- Background in Embedded Systems, UNIX systems, Web Development, AI/LLMs
- Relevant Coursework: Data Structures and Algorithms, Computer Logic Design, Matrix Theory, C & C++ programming, Deep Learning, Computer Architecture

## SKILLS

C/C++, Nix, Rust, Zig, Verilog, Shell (Fish, Bash, tcsh), Helix, Docker, Git, AI-LLMs, Rustup, CMake, Linux Distributions, BSD, Windows, Proxmox, OpenSolaris

## PROFESSIONAL EXPERIENCE

### IEEE UCF CPU Project - Kernel Development Team

August 2025 - Present

- Developing kernel-level software for RISC-V CPU built from scratch, porting Doom and Quake to custom hardware architecture

### Learning Assistant - Employee

August 2024 - May 2025

- Assisted undergraduate students with learning calculus. Part-time position (10h/week).

### Advanced Experimental Vehicles - Programmer, Leader, Builder

November 2023 - May 2025

- Developed Electron app using Raspberry Pi 5 for monitoring and controlling solar car systems
- Won 2nd Place in Division and Lockheed Martin Award for "Highest Level of Engineering Excellence"

### Chameleon Research Project - Programmer

January 2024 - March 2025

- Developed AI/LLM powered research project for writing, grant funded by Florida Atlantic University with HPC access

## PROJECTS

### [UniUtils](#)

October 2023 - November 2024

- Schedule generation tool for students with classroom finder functionality. 1st Place at Night Hacks 2023 hackathon, submitted to ShellHacks

### [limebar](#)

December 2024 - March 2025

- Wayland graphical status bar using pango, cairo, xdg-shell-client protocol and wlr-layer-shell-unstable