Aditya K. Ladhane

Electronics and Telecommunication Student

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CAREER OBJECTIVE

Passionate about innovation and problem-solving, with a **strong foundation** in **Electronics and software development**. Proficient in working with **microcontrollers, microprocessors,** and emerging technologies. I aim to **contribute** to the field of Electronics and Telecommunication by leveraging my knowledge, I am actively seeking Internship opportunities to apply my knowledge, gain practical experience, and contribute to impactful projects.

EDUCATION

Savitribai Phule Pune University ***November 2022 – June 2026(Expected)***

Dr. D. Y. Patil Institute of Technology

Bachelor in Electronics and Telecommunication Engineering

SKILLS

- **Programming:** HTML, CSS, JavaScript, C, C++, Python, JAVA (up to J2ME)
- **VLSI Design:** Verilog HDL, System-on-Chip (SoC) design
- **Software Tools:** Altium CircuitMaker for PCB Design, MATLAB, Tinkercad, ModelSim
- **Soft Skills:** Teamwork, Problem-solving, Communication skills, Leadership

CERTIFICATION

- **VLSI Design Using Verilog HDL**

  Completed a certification course at Maven Silicon, gaining in-depth knowledge of designing and simulating digital systems using Verilog HDL for VLSI applications.

- **VLSI System-on-chip (SoC) Design**

  Earned a certification from Maven Silicon, showcasing proficiency in designing and integrating complex SoC architectures with a focus on low-power, high-performance digital systems.

PROJECTS

- **Digital Clock Design Using Verilog**

  I designed and implemented a digital clock using **Verilog HDL** that displays time in HH:MM:SS format. The project involved creating **modules for clock division, counters, and display management**. I used **ModelSim** for simulation to validate the functionality of the design and **FPGA synthesis** for deployment. This project focused on **modular design** principles and **efficient performance**.

- **Digital Communication System Using MATLAB**

  In this project, I simulated a **basic Digital Communication system** using **MATLAB**, where I implemented **modulation and demodulation techniques**. The system's performance was analyzed through **signal-to-noise ratio (SNR)** and **bit error rate (BER)** metrics, helping me understand the fundamental concepts of digital communications. The project also included tools for visualizing waveforms and signal spectra, allowing for better system analysis and design optimization.

- **Arduino-Based Smart Irrigation System**

  I developed an **automated Smart Irrigation System** using an **Arduino** microcontroller, incorporating **soil moisture sensors** and a water pump. The system was programmed to monitor soil moisture levels and **control irrigation based on real-time data,** ensuring optimal water usage. The project emphasized **sustainability** and **energy efficiency** by integrating **solar power** to drive the system, showcasing my ability to design practical and efficient **embedded systems for environmental applications**.