

# PRATHAMESH RAJESH PATIL

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## CAREER OBJECTIVE

A motivated Electrical Engineering student with a strong foundation in Renewable Energy, Embedded Systems, and Project Management. Possess hands-on experience in Solar EPC projects with technical expertise in **PVsys, Helioscope, AutoCAD, MATLAB, SketchUp, and OrCAD**. Skilled in embedded hardware-software integration including **PCB design, microcontrollers, and programming in C and Python**. Certified in **Google Project Management, applying structured planning, execution, and team collaboration to technical projects**. Eager to leverage engineering knowledge and management tools to deliver sustainable, cost-effective, and technically sound solutions.

## TECHNICAL SKILLS

- Software: PVsys, Helioscope, AutoCAD, MATLAB, SketchUp, OrCAD
- Programming: C, Python, Embedded Systems
- Other: Project Management, PCB Design

## EDUCATION

- Bachelor of Engineering (Electrical Engineering), *(NOV2022 to Present)*  
[Shramsadhana Bombay Trust, College of Engineering & Technology, Jalgaon]
- HSC – (Biology & Mathematics), *(AUG 2020 to July 2022)*  
[TVES'S Dhanaji Nana Mahavidyalaya, Faizpur]

## PROJECTS

- **Solar Powered Smart Groundwater Recharge & Quality Monitoring System with Embedded IoT (Ongoing)** – *(AUG 2025 to Present)*

Designing a solar-powered IoT system for sustainable groundwater recharge with real-time water quality monitoring. Integrates sensors, microcontrollers, and cloud platforms for automated data collection and efficient water management.

- **Analysis of 50 kW Rooftop Solar PV System Using PVsys** – *(MAY 2025 to JUN 2025)*

Simulation and performance study of a grid-connected rooftop solar system at Swami Hospital, Jalgaon, analysing energy generation, shading losses, and efficiency with PVsys V8.0.13

- **Residential Rooftop Solar PV System (9.66 kW DC / 6.72 kW AC)** – *(MAR 2025 to APR 2025)*  
Helioscope simulation study for a rooftop system in Savda, Maharashtra, yielding 13.55 MWh/year with 72.1% performance ratio, considering shading, temperature, and inverter losses

## **CERTIFICATIONS**

- Google Project Management – Coursera (Google)
- Electrical Power Systems – Coursera (University at Buffalo)
- Electric Industrial Operations and Market – Coursera (Duke University)
- MATLAB Onramp – MathWorks
- AutoCAD – Soft aid Academy, Jalgaon
- Mastering Microcontroller and Embedded Driver Development – Udemy
- PCB Layout Design with CAD Software – NPTEL
- Programming in C & Python – NPTEL, Scaler
- 3D CAD Fundamentals – Coursera (National Taiwan University)