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Profile

B.Tech graduate in Electronics & Computer Engg. with strong roots in electronics, electrical and Computer Science. Seeking an entry-level position where I can apply my technical skills so that in time my expertise grows and have a meaningful impact on my peers.

Projects & Experience

Rail Spider

Oct 2025 - Nov 2025

Free-lance hardware project

- ▶ Rail Spider is an autonomous rover equipped with a camera module to detect railway track obstructions.
- ▶ I was consulted for creating schematics for a micro-controller using KiCAD.

Precise Temperature Monitoring for Laboratories

Apr 2025 - Nov 2025

- ▶ Developed a sensor board powered by ESP8266 micro-controller to monitor temperature and humidity variations in closed environments.
- ▶ Initial versions used temperature sensor modules to continuously monitor environment conditions in pharmaceutical labs and send data over Bluetooth.
- ▶ Later implemented corrective systems to maintain temperature at an optimum and replaced the hardware with a circuit board.

Conducted a Workshop on Embedded Systems and IoT

Oct 2025

, St. Joseph's College of Engineering and Technology, Palai

- ▶ Was invited to conduct a hands-on session for undergrads.
- ▶ Taught the fundamentals of Embedded software design and how to interface devices using connectivity technologies such as UART, WiFi, MQTT, BLYNK, ESP-NOW....etc.
- ▶ Introduced students to firmware development tools, micro-controller boards and led basic embedded projects.

Calibration System for Solar Panels

Apr 2025

Minor Mini-project

- ▶ Devised a cost-effective optimization technique for solar panels lacking continuous tracking.
- ▶ Noticeable efficiency improvements can be made by seasonal calibration of the tilt angle of affixed solar panels.

Skills

Programming languages

C Java
JavaScript Python
EmbeddedC

Tools

ESP IDF KiCad
Git Docker
Typst Gnu/Linux
Raspbian OS TeX studio

Languages

English Fluent
Hindi Functional
Malayalam Native

References

Dr. Giby Jose, St. Joseph's
Hod Electronics College of
& Computer Engg. and
Engg. Dept. Technology
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hodecs@sjcetpalai.ac.in

- Led a team to implement the hardware powered by a micro-controller which is tasked to align the panels correctly 8 times a year.

UCSS - An App Designed for Finding Files Easier

Jun 2024 - Apr 2025

Project

- Made a mobile application dedicated for peer-to-peer file sharing.
- Integrated Contextual Semantic Search to retrieve files easier and a face recognition API by Regula™.
- Performed documentation duties.

Signage Systems

2023 - Jun 2024

Project, St. Joseph's College of Engineering and Technology, Palai

- Developed and installed a smart academic statistics display at my college.
- Was tasked with designing and documenting hardware for a Raspberry Pi based system.
- Used Raspberry Pi micro-controller to run a custom Operating System which displayed info on an LED screen.

Internship

May 2023

Domestic Airport Trivandrum,

- Summer internship at Communication, Navigation & Surveillance department of Trivandrum domestic airport.
- Studied advanced engineering innovations implemented in an environment having low tolerance for failure.

Multimedia Transmission via HDMI port

Feb 2023 - May 2023

Project

- A coordinated effort was taken to increase the ease of sending files through HDMI ports.
- Sought a solution through wireless communication technologies such as Bluetooth.
- Failed to implement lossless transmission.

Education

Bachelor of Technology in Electronics & Computer Engineering

2021 - 2025

St. Joseph's College of Engineering and Technology, Palai

- CGPA: 8.31/10
- Developed a file manager as main project.
- Specialized in embedded software development.
- Extracurriculars: Member of the campus Startup Bootcamp Initiative, Member of Google Developer Student Club, Operational Head of department student association

Bachelor of Technology(Minor)

2022 - 2025

St. Joseph's College of Engineering and Technology, Palai

- Specialized in Power Systems
- Devised an advanced calibration system for installing solar panels using micro-controllers.

Higher Secondary Education (99%)

2019 - 2021

St. Mary's H.S.S, Arakulam

High School (94%)

2006 - 2019

Shanthal Jyothi Public School, Muttom