

PATAN SALARKHAN

Electrical & Electronics Engineering.
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SUMMARY OF QUALIFICATIONS

- Aspiring Electrical & Electronics Engineer (Undergraduate, B. Tech) specializing in AI for Autonomous EV Systems & Mobility, with expertise in railway signalling, embedded systems, AI integration. Experienced in real-time data loggers, network failure analysis, Raspberry Pi development, and safety-critical automation. Passionate about developing AI-based solutions for Energy, railways, EVs, aerospace, healthcare, and smart mobility.

Key Highlights

- Winner, NASA International Space Apps Challenge 2025 (Art & Technology, VIT-AP)
- Awarded 2nd Prize in Innovation Day at VR Siddhartha University for demonstrating technical Prototype innovation.
- Secured INR 14 Lakh total national Student grants for AI-based Railway Inspector, ranked Top 2 India at IIT Bhilai.
- Completed 6 Months On-site Railway Signalling Internship with hands-on RTU & Data Logger testing/maintenance.
- Regional Finalist, IIM Calcutta Innovation Park (Maruti Suzuki Cohort)
- Invitee, IIM Bangalore x Alstom Sustainable Mobility Program

EDUCATION

KLEF Deemed to Be University Bachelor of Technology in Electrical and Electronics Engineering (EEE) <i>Specialization: Autonomous EV Systems Mobility & EVT</i> <ul style="list-style-type: none">CGPA: 8.22/10Selected INR 40,000 for Smart Bike Key Remainder Project from KL ACIC.	Vijayawada, AP <i>April 2026</i>
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A.A.N.M. & V.V.R.S.R. Polytechnic, Gudlavalleru Diploma in Electrical and Electronics Engineering (EEE) <ul style="list-style-type: none">Percentage: 68.85/100	Gudlavalleru, Krishna District, AP November 2020 – April 2023
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GM HIGH SCHOOL Secondary Education <ul style="list-style-type: none">536/600 (9.3/10)	Gudivada, Krishna District, AP
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INTERNSHIP EXPERIENCE

Efftronics Systems Pvt. Ltd. Mangalagiri, Andhra Pradesh	July 2022 – January 2023
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DATA LOGGER MAINTENANCE, NETWORK FAILURES, INSTALLATION

- Installed, tested, and commissioned data loggers and control units across multiple railway stations to ensure reliable signalling and network performance.
- Led onsite troubleshooting, annual maintenance, and validation of analog/digital inputs for smooth operation of real-time railway monitoring systems

TECHNICAL SKILLS

- Core Skills:** Hands on ESP32, Raspberry PI 5, Equipment Testing & Installation, Battery Management Systems, CAN BUS, IoT Testing & integration, railway signalling systems, Sensor Integration, AI -driven Diagnostics.
- Programming Languages:** Python, C Programming, Open CV, Computer Vision, Git, Generative AI integration.
- Soft Skills:** Innovative mindset, Effective Communication, Adaptability, Design Thinking.
- Software:** MS Power Point, MS Word, Autodesk Fusion 360, MATLAB, Simulink.

PROJECT EXPERIENCE

- Smart Energy Monitoring and Control System for homes**
Tools: Flutter, API, ESP32, MQTT, Current & Voltage Sensor.
Live Electricity Consumption Monitoring with Prediction and Billing
 - Developed ESP32-based IoT system for real-time energy monitoring
 - Enabled remote appliance control and predictive bill forecasting
- Intelligent Energy Monitoring & Predictive Fault Detection System in Electrical Vehicles using CAN Bus & LLM**
Tools: Raspberry PI, BMS, Python, Gemini API, CAN BUS, ESP32.
AI Vehicle Diagnostic and HMI Voice Assistant
 - Developed a real-time EV health analytics platform (ESP32, CAN, RS485) with AI-driven fault detection and energy optimization.
 - Built intuitive dashboards and a multilingual assistant for battery diagnostics, trip, and charging recommendations.

3. Railway Track Inspection Robot (Selected for INR 14 Lakhs Government Grant) (Ongoing)

AI Track Faults and fasteners Detection and Real-time Data Sharing (in development)

- Designed Proof of concept (PoC) vision-based robot for railway track damage detection
- Integrated real-time alerts and anti-theft features for national selection

STUDENT GOVERNMENT GRANTS AND RECOGNITIONS, ACHIEVEMENTS

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| 1. STPI (Software Technology Parks of India) Kalpataru CoE, Vizag – INR 4 Lakhs Grant Funding
Railway Track Inspection Robot | November 2024 |
| <ul style="list-style-type: none">• Secured INR 4 Lakhs Grant for Railway Track Inspection Robot Project under Industry 4.0 OCP• Recognized in University under Project Grant at 3rd Year BTech | |
| 2. IIT BHILAI – INR 10 Lakhs Under GENESIS SCHEME | March 2025 |
| <ul style="list-style-type: none">• Raised INR 10 Lakhs for Railway Track Inspection Robot Under GENESIS SCHEME by MEITY• Selected as Top 2 among 19 teams in Final Round from All over India | |
| 3. NASA International Space Apps Challenge 2025 - Winner (VIT-AP Local Event) | October 2025 |
| <ul style="list-style-type: none">• Winner in Art & Technology category at NASA Space Apps Challenge 2025, Amaravati Local Event hosted by VIT-AP University. Awarded Winner Trophy by Sireesh Pallikonda, VP Business Development, Skyroot Aerospace & University appreciation. | |
| 4. IIM Calcutta – Maruti Suzuki Nurture Cohort 3, Eastern India Regional Finalist | July 2025 |
| <ul style="list-style-type: none">• Selected among top innovations for the regional round pitch at IIM Calcutta Innovation Park. | |
| 5. IIM Bangalore – Sustainable Mobility Meetup Invitee | Feb 2025 |
| <ul style="list-style-type: none">• Invited to NSRCEL IIM Bangalore & Alstom's Sustainable Mobility Incubation Program networking event. | |
| 6. PARTICIPATED IN ISIE INDIA SIEP E-BIKE CHALLENGE COMPETITION | January 2024 |
| <ul style="list-style-type: none">• Top 6th Team out of Total 68 Teams from all over India across various Colleges in LUMINOUS SIEP E-BIKE CHALLENGE 2024• Contributed as Innovation & Electrical Systems Engineer for smart Display integration. | |

Extra Curriculum Activities

- CORE Member of Financial and Logistics Council – **STUDENT ACTIVITY CENTER KL University**
- CLUB Core Member of **KL SPARK & Tesla Automation Club**, Department of Electrical Engineering in KL University.

LANGUAGES

- English (Fluent)
- Hindi (Fluent)
- Telugu (Native)
- Urdu (Native)

CERTIFICATIONS

- ISRO Space Science and Rocket Technology (April/2024)
- AUTODESK FUSION 360 Certified (April/2025)

References:

1. Dr. Narasimha Raju, Director, MDIE, HOD DTI.
Koneru Lakshmaiah Education Foundation (KL University)
Email: narasimharaju_eee@kluniversity.in

3. Dr. A Pandian, Director, HOD Department of EEE.
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2. Rama Krishna Dasari, Founder, CEO, MD
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4. Dr. D Kalyan, Asst Professor, Department of EEE.
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