

JOHANAN S. A.

Mechanical Engineer (in-training)



Personal Information

D.O.B: 23-06-2003

Address: B125, 19th Street, Rahmath Nagar, Palayankottai, Tirunelveli - 627011, Tamil Nadu, India.

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Email: johanan2306@gmail.com

Degree: B. E. – Mechanical Engineering

Year of Study: III

College: National Engineering College

College Address: K.R. Nagar, Kovilpatti, Thoothukudi – 628503

Area of Interest: Research & Development, Mechanical Design (CAD & CAA), Robotics, IOT, Machine Learning and Web Development (Full Stack)

GitHub Profile: <https://github.com/johanan-23>

LinkedIn Profile: <https://www.linkedin.com/in/johanan23/>

Experience / Projects

5-Axis Robotic Arm | Team Leader | 2024

- Designed and assembled a 5-axis robotic arm using SOLIDWORKS, reducing design errors by 20% through precise 3D modeling. 3D-printed the entire body with PLA material using FDM process
- 3D-printed the body using PLA material with the FDM process, cutting production costs by 15%.
- Developed and wired electrical circuits using Arduino and servo motors, achieving 100% functionality on the first test
- Led a team of 4 members, completing the project within 2 weeks and demonstrating functionality to 150+ peers and faculty.

Prediction of Production Parameters of Aluminium Wire Rod Manufacturing using Machine Learning & Optimization Techniques | Team Leader | 2024

- Engineered a neural network architecture with PyTorch, boosting model accuracy by 25% in predicting production parameters.
- Reduced data processing latency by 30% through optimized model integration under the mentorship of Dr. Andrews.
- Trained the model on 50,000+ records, improving prediction reliability by 20%.
- Led the team to secure selection in the college-level Smart India Hackathon, outperforming 50+ competing teams.

Skill Development Platform for Engineering Students, Skillpix | Team Leader | 2023

- Conducted a customer survey with 200+ engineering students, improving feature relevance by 40%.
- Developed the front end using React + Remix.js, reducing page load time by 25%.
- Prepared the backend logic with TypeScript, achieving 99.9% uptime during beta testing.
- Applied for Newgen IEDC funding and advanced through 2 rounds, securing eligibility for the final grant stage.

RTC-based Solar Tracking System for Solar Energy Farms | Team Leader | 2023

- Conducted literature and patent reviews of 15+ research papers to identify optimization techniques for solar tracking.
- Built a prototype using Arduino and SG90 servo motors, increasing solar panel efficiency by 22%.
- Reduced energy loss by 15% through real-time solar tracking based on RTC inputs.
- Earned an 'O' grade for the project, ranking in the top 5% of submissions.

For more info on my Projects and Certifications visit my **Portfolio Website:** www.johanan.in

Education

Bell Matriculation Higher Secondary School, Tirunelveli up to Grade VI	2022 - 2015
St. Antony's Public School (CBSE), Tirunelveli Grade VII - XII	2016 - 2021
10 th Exam: 83.6% 12 th Exam: 77%	
National Engineering College, Kovilpatti Bachelors in Engineering (B.E.)	2022 - 2026
Major: Mechanical Engineering CGPA up to 5 th Semester: 7.85	(ongoing)

Certifications, Awards & Positions



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- Dassault Systèmes – SOLIDWORKS CAD Design Associate – 2023
 - Dassault Systèmes – SOLIDWORKS Additive Manufacturing Associate – 2024
 - Dassault Systèmes – SOLIDWORKS Sustainability Associate – 2024
 - TCS Code Vita Season 11 – Global Rank - #834 – 2024
 - National Engineering College – Automotive Club – Student in-Charge – 2024
 - National Engineering College – IEDC Student Club – Student in-Charge – 2024
 - SRM Ramapuram Tech Fest – Code-a-thon – Runner up – 2023
 - ISHRAE – Student Member – 2024
 - SpellBee 2015-2016 – School Topper & Competency Category Award – 2016
 - National Engineering College Hi-Tech Fest 2k23 | 2nd Place – Web Design – 2023

Skills & Abilities

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- Effective Communication
 - Project Management
 - Troubleshooting
 - Mechanical Design
 - SOLIDWORKS
 - NX CAD
 - Ansys
 - Arduino
 - Raspberry Pi
 - Machine Learning (PyTorch & TensorFlow)
 - React.js, Next.js & Remix.js
 - **Programming languages:** C, Python, JavaScript, TypeScript