

SARAVANAN R K

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[in www.linkedin.com/in/saravanan-rk/](https://www.linkedin.com/in/saravanan-rk/) | [Rks2005](https://github.com/Rks2005) | ieeecollabratec.ieee.org/app/myprofile/about |

Chennai, Tamil Nadu - 600 106, India

OBJECTIVE

Seeking a challenging position in **Electronics and Communication engineering** to leverage my expertise in **VLSI, Embedded systems, IoT integration, and system design**. Aiming to contribute to innovative projects at the intersection of **technology, healthcare, and sustainability**, applying **practical problem-solving** to fields such as **medical device innovation, renewable energy solutions, and smart infrastructure**. My goal is to develop impactful and efficient solutions that bridge the gap between **engineering advancements and real-world applications**.

EDUCATION

- **Sri Sairam Engineering College** Sep. 2023 - Present
Bachelor of Engineering in Electronics and Communication
◦ GPA: 8.58/10.00 Chennai, India
- **Daniel Thomas Matriculation Higher Secondary School** Jun 2022- Jun 2023
HSC
◦ Grade: 92.6% Chennai, India
- **Daniel Thomas Matriculation Higher Secondary School** Jun 2020 - Jun 2021
SSLC
◦ Grade: 99% Chennai, India

PROJECTS

- **Electricity-Generating Farms: Solar-Driven Precision Farming System**
Dec 2023 – Jun 2024
 - Achieved 120.5% higher land efficiency using semi-transparent solar panels.
 - Integrated IoT sensors ($\pm 2\%$ accuracy) for real-time climate and soil monitoring.
 - Reduces water consumption by 30% with AI-driven irrigation optimization.
- **Intra Puff Pressure Analyzer: Dual-Eye Simultaneous Glaucoma Detection** Sep 2024 - Present
Tools: AI/ML, Embedded Systems, IoT, Signal Processing, Python, TensorFlow [Rks2005/Glaucoma](#) |
 - Developed AI model (94.7% accuracy) for early glaucoma detection.
 - Reduces testing time by 40% using dual-eye air puff technology.
 - Ensures 90.2% reliable IoT data transmission for real-time monitoring.

PATENTS AND PUBLICATIONS

C=CONFERENCE, J=JOURNAL, P=PATENT, S=IN SUBMISSION, T=THESIS

- [S.1] Saravanan R K, et al. (2025). **Comprehensive Analysis and Optimization of High-Speed Multiplication Architectures and RF Energy Harvesting Techniques for Low-Power Systems**. Manuscript submitted for publication in *Fifth IEEE International Conference on Computing and Communications Technologies (ICCCCT'25)*.

SKILLS

- **Programming Languages:** C, C++, Python, MATLAB, Verilog (Beginner)
- **Web Technologies:** HTML, CSS, JavaScript, React.js, Node.js
- **Database Systems:** MySQL, Firebase, MongoDB
- **Data Science & Machine Learning:** TensorFlow (Beginner), OpenCV (Beginner), Pandas (Beginner), NumPy (Beginner)
- **Cloud Technologies:** Google Cloud, Firebase (Intermediate)
- **DevOps & Version Control:** Git, GitHub
- **Specialized Area:** VLSI Design (Beginner), Embedded Systems, FPGA, IoT
- **Mathematical & Statistical Tools:** MATLAB (Beginner)
- **Other Tools & Technologies:** LabVIEW, Arduino, Raspberry Pi, Simulink, KiCad, Proteus, Keil
- **Research Skills:** Technical Paper Writing, Literature Review, Experimentation, Data Analysis, Prototyping, Simulation

HONORS AND AWARDS

- **2nd Runner-Up – Navonmesh National Level Idea Pitching Competition** Feb 2025
E-cell of College of Agriculture in collaboration with E-cell of IIT Madras
 - Developed a healthcare IoT solution for remote Glaucoma detection.
- **1st Runner-Up – Inter College Hackathon** May 2024
Sri Sairam Engineering College
 - Developed a Smart Solar-Driven Precision Farming System.
- **Top 100 Winning Teams – National Level Hackathon** Jun 2024
Hack4Purpose
 - Showcased the Smart Solar-Driven Precision Farming System at a national-level event.
- **Top 90 Teams – Smart India Internal Hackathon** Sep 2025
Sri Sairam Engineering College
 - Designed an innovative IOP measurement device.
- **Top 50 – MSME 4.0 Internal Hackathon** Oct 2025
Sri Sairam Engineering College
 - Proposed a novel glaucoma detection solution.
- **Contestant – IEEE CAS Design Competition 2024-25** Feb 2025
IEEE Circuits and Systems Society
 - Known for a simple circuit design solution, In healthcare.
- **Top 5% – NPTEL Course on Design Design Thinking** Nov 2023
NPTEL (IIT Madras)
 - Achieved a top 5% by securing 90% in the Design Thinking Course.
- **Elite Silver – NPTEL Course on Design Technology and Innovation** Apr 2024
NPTEL (IIT Madras)
 - Achieved Elite silver certification by securing 76% in the Design Technology and Innovation Course.
- **IIT Bombay,Spoken Tutorial – Arduino Training** Oct 2024
Spoken Tutorial (IIT Bombay)
 - Secured 100% in the Arduino Training Course.
- **IIT Bombay,Spoken Tutorial – eSim Training** Oct 2024
Spoken Tutorial (IIT Bombay)
 - Secured 92.86% in the eSim Training Course.
- **IIT Bombay,Spoken Tutorial – C Training** Dec 2023
Spoken Tutorial (IIT Bombay)
 - Secured 67.50% in the C Training Course.
- **Accepted Paper – IEEE Conference on Computing and Communications Technologies (ICCCT'25)** 2025
IEEE Conference
 - Published a research paper on Comprehensive Analysis and Optimization of High-Speed Multiplication Architectures and RF Energy Harvesting Techniques for Low-Power Systems.
- **Winner in IEEE CAS Poster Design Competition on Quantum Computing** 2024
IEEE CAS SBC of Sri Sairam Engineering College
 - Designed an informative poster on Quantum Computing
- **Winner in IEEE CAS Poster Design Competition on Neuromorphic Computing** 2024
IEEE CAS SBC of Sri Sairam Engineering College
 - Designed an informative poster on Neuromorphic Computing

VOLUNTEER EXPERIENCE

- **Treasurer** Jan 2025 - Dec 2025
IEEE SBC of CAS at Sri Sairam Engineering College

PROFESSIONAL MEMBERSHIPS

- **IEEE Membership ID: 100403241** Oct 2024 - Present
- **IETE Membership ID: 319273** Nov 2024 - Present

CERTIFICATIONS

- **NPTEL - Design Thinking** Certified by [NPTEL](#) Nov 2023
- **C Training** Certified by [IIT Bombay Spoken Tutorial](#) Dec 2023
- **NPTEL - Design Technology and Innovation** Certified by [NPTEL](#) Apr 2024
- **Arduino Training** Certified by [IIT Bombay Spoken Tutorial](#) Oct 2024
- **eSim Training** Certified by [IIT Bombay Spoken Tutorial](#) Oct 2024

ADDITIONAL INFORMATION

Languages: Python (Intermediate), C (Intermediate), C++ (Intermediate), Java (Beginner)

Interests: Embedded Systems, VLSI Design, AI in Healthcare, IoT

REFERENCES

1. **Dr. J. Thamil Selvi**

Head of the Department, Electronics and Communication. Organization/Institution Name: Sri Sairam Engineering College, Email: hod.ece@sairam.edu.in, Phone: +91-87545-02220, *Relationship: Project Guide.*

2. **Dr. M. Shanmugathai**

Professor, Department of English, Organization/Institution Name: Sri Sairam Engineering College, Email: shanmugathai.eng@sairam.edu.in, Phone: +91-94451-11714, *Relationship: Mentor.*

3. **Usha S**

Associate Professor, Department of Electronics and Communication Engineering, Organization/Institution Name: Sri Sairam Engineering College, Email: usha.ece@sairam.edu.in, Phone: +91-98412-49798, *Relationship: Mentor.*