JISHNU RAY

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Profile

A dedicated Electronics and Communication Engineering student with a strong interest in communication systems and signal processing. Possessing a solid foundation in programming languages such as Java and C, I am driven to excel in my field. My strong work ethic, ambition, and commitment to innovation make me a promising candidate for roles requiring technical expertise.

Education

Institute of Engineering and Management, Kolkata	**CGPA: 9.75/10**
Bachelor of Technology in Electronics and Communication Engineering	**2022–2026**
Purulia Zilla School, Purulia	**2022**
Higher Secondary (WBCHSE) - 95.6%	
Purulia Zilla School, Purulia	**2020**
Secondary (WBBSE) - 93.14%	

Experience

Kolkata Metro Railways	**Duration: 7th June 2025 - 5th July 2025**

Training in Signaling and Telecommunication Systems

- Analyzed telecommunication networks, interfacing, train detection, OFC systems, and real-time operational workflows across four major Kolkata Metro units.
- Worked closely with engineers to understand system maintenance, fault diagnosis, safety procedures, and the functional logic of railway signaling and communication equipment.

Projects

Secure Ultra Wideband FSS Structure for Spatial Filter and Upcoming 5G Communication

IEEE Xplore Published

- Delivered advanced wide-band FSS (3.45–20.6 GHz) with polarization and angle-insensitive stability, providing superior EMI shielding and interference suppression for 5G/6G, radar, and advanced wireless systems.

Text-to-SQL Query Generation

IEEE Xplore Published

- Developed an AI system that accurately converts plain English into SQL queries, enabling fast, code-free data access for dashboards, customer support, and search applications.

Design and Development of Dual Wide Band Frequency Selective Surfaces

IEEE Xplore Published

- Designed dual wideband FSS using ultra-thin dual metallic layers, achieving enhanced passband performance in 3.53–5.3 GHz and 3.53–4.21 GHz ranges for 5G Wi-Fi systems, EMI/EMC shielding, and radar filtering.

Skills

Programming: C, Java, SQL (Basic), Verilog, VHDL
Software: CST Studio Suite, Xilinx Vivado
Technical: Signal Processing, Digital Electronics, Operating Systems
Soft Skills: Leadership, Management, Content Writing
Interests: Football, Content Writing, Cricket, Badminton, Sketching(3rd year completed in this domain)

Certifications

- Problem Solving Through Programming in C – NPTEL
- Database Management System – NPTEL
- Digital Design With Verilog – NPTEL
- Digital Circuits – NPTEL
- Leadership and Team Effectiveness – NPTEL
- NPTEL Star (NPTEL Motivated Learner) – NPTEL
- Academic Rank 3rd in Third Year of Engineering