

# Shinjini Chakraborty

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• Kolkata, India •

## INTRODUCTION

Software Engineer skilled in full-stack development, financial systems, and machine learning. Experienced with React, Node.js, REST APIs, Kafka, and database-backed applications. Published researcher in computer vision and NLP (ICDAR 2025). B.Tech CSE (AI & ML), CGPA 9.38, graduating 2027.

## EDUCATION

**B.Tech in Computer Science & Engineering (AI&ML Specialization)** CGPA: 9.38 (Current Avg)

*Institute of Engineering & Management, Saltlake, Kolkata* | Expected 2027

Class XII – South Point High School 90.0% | 2023

Class X – South Point High School 98.4% | 2021

## SKILLS

**Programming:** Python, Java, C, JavaScript, TypeScript

**Frontend:** React.js, Next.js, HTML, CSS, Tailwind CSS

**Backend:** Node.js, Laravel, RESTful API Development, Kafka, Zod Validation

**Databases:** MySQL, PostgreSQL, MongoDB

**Data & ML:** Pandas, Data Analysis, Statistical Thinking, TensorFlow, PyTorch, NLP, Computer Vision, RAG

**Tools:** Git, GitHub, Kafka, Zod, Google Colab, MATLAB, LATEX

## EXPERIENCE

**R&D Intern (On-site)** Jul 2025 – Present

*IEM Centre of Excellence in Data Science (CEDS)* | Kolkata, India

- Engineered TradeSim, a real-time trading simulation platform (Next.js, TypeScript, Tailwind CSS, Zod) with virtual portfolios, live P&L computation, leaderboards, and private competitive rooms — demonstrating direct experience building financial technology, hosted currently at [tradesim-aiml.iem.edu.in](https://tradesim-aiml.iem.edu.in).
- Implemented scalable frontend architecture with secure Zod-validated authentication flows, real-time stock search, and reusable, theme-aware financial UI components; built modular room management logic with accessibility support.
- Mentoring junior students at the CEDS lab on full-stack development practices, project architecture, and deployment workflows.

**Software Developer Intern (Remote)** Jul 2025 – Present

*Young Architects* | Kolkata, India

- Created and launched a responsive landing page for a legal and business consultancy using HTML, CSS, and JavaScript.
- Designed, planned and executed an e-commerce platform from scratch, currently live at [shobdodharaprakashani.com](https://shobdodharaprakashani.com).

**Frontend Developer Intern (Hybrid)** Jul 2025 – Aug 2025

*BTR Communications* | Kolkata, India

- Built a fully responsive Learning Management System frontend for the West Bengal State Police Academy using React.js.
- Refactored and enhanced a private hospital website built with PHP and Laravel, improving UI consistency and frontend performance.

**Student Researcher (On-site)** Aug 2024 – Jun 2025

*IIC – IEDC IEM* | Kolkata, India

- Built and deployed a disease diagnosis chatbot using Retrieval-Augmented Generation (RAG) and NLP models, achieving 85% diagnostic accuracy with 500+ test users.
- Architected and deployed the official website for the Centre of Excellence in Data Science laboratory, handling frontend architecture and deployment.

## PUBLICATIONS

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[HiLEx: Image-Based Hierarchical Layout Extraction from Question Papers](#) — ICDAR 2025 Co-authored research accepted at ICDAR 2025. Trained and evaluated computer vision and NLP models on a multimodal dataset of 1,965 annotated exam papers for structured academic document understanding. Created a document layout analysis pipeline to identify and extract structured components from scanned academic documents, automating segmentation and classification workflows.

## HACKATHONS & COMPETITIONS

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- **Smart India Hackathon 2024:** Worked on a Deepfake Detection system, focusing on video analysis and model evaluation.
- **Accenture GenAI Hackathon:** Crafted an AI-driven solution for real-world business use cases using generative AI techniques.
- **Diversio 2k25 (MLH):** Built the frontend of a Blood Bank Management System using React.js under competitive, time-constrained conditions.
- **Riseln Web3 Hackathons:** Participated in blockchain-focused hackathons on Aptos, Algorand, and Stellar, building AI-integrated Web3 prototypes combining on-chain workflows with ML-driven logic.

## CERTIFICATIONS

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- **PwC Women's Leadership Development Program (WLDP)** (PwC Acceleration Center India): Sep 2025 – Mar 2026
- **Job Simulations** (Forage (JPMorgan Chase & Co., Deloitte)): 2025 – 2026 — Completed Software Engineering and Cybersecurity simulations including Project Setup, Kafka Integration, H2 Integration, REST API Integration, Controllers, and Cyber Security tasks
- **Cybersecurity and Cryptography Courses** (Coursera): Completed: Cryptography and Information Theory, Cyber Security Fundamentals, Advanced System Security Topics