

Rajat Sandeep Sen

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Introduction

Self-taught Full Stack Developer, DevOps, AI Engineer, and FOSS enthusiast

Freelancer and Open Source Contributor. Lead FOSS, Tech & Entrepreneurship communities in campus. Recently Co-Founded startup as CTO.

Education

St Joseph's College of Engineering & Technology, Palai Nov 2021 – June 2025

- BTech in Artificial Intelligence & Data Science
- CGPA: 8.11
- Minor Degree in Robotics
- **Coursework:** Artificial Intelligence, Computer Network, OOPs, DSA, Machine Learning, Deep Learning, NLP

Work Experience

Chief Technical Officer, Manolo Pvt Ltd – Palai, Kottayam Jan 2025 – Present

- Co-Founded the startup as parent holding company
- Currently building & maintaining infrastructure and backend of 2 SaaS products

GenAI Developer Intern, Beckn Protocol – FIDE, Bangalore May 2025 – May 2025

- Published packages for Digital Public Infrastructure Protocol, Beckn in Typescript, Python & Go-Lang
- Built user friendly agentic server for new Indian Digital Energy Grid project

Frontend Developer Intern, Gtech-Mulearn – TechnoPark, Thrivandrum July 2023 – Dec 2023

- Maintain websites as Remote frontend intern for Mulearn, a edu-tech community in India
- 6 months experience with Reactjs (TypeScript) and Django (Python)
- Rewrote the UI components with better abstraction and reusability

Volunteering Experience

Chief Technical Officer, IEDC – Startup Bootcamp, SJCT Palai Jun 2022 – Feb 2025

- Promoted to CTO from technical officer in 2024 for leading the tech team
- Created & maintained IEDC website at 2022
- Volunteered in organizing IEDC Summit 2022
- Actively engaged in organizing hackathons, workshops and tech talks for promoting entrepreneurship at campus

FOSS Club Lead, The Nexus Project – SJCT Palai Sep 2023 – Dec 2024

- Restarted the FOSS community at campus
- Conducted workshops and events to promote FOSS culture

Designer & Web Developer, Tedx – SJCT Palai Jan 2025 – Feb 2025

- Helped in organizing TEDx event at campus
- Designed poster & created TEDx website at 2025

TensorFlow Lead, Google Students Developer Club – SJCT Palai Sep 2022 – Jul 2024

- Promoted to TensorFlow Lead in GSDC in 2024
- Conducted workshops on TensorFlow, Firebase, Google Cloud Platform
- Created & maintained GDSC website at 2022 & 2023

Co-Technical Lead, UiPath Academic Alliance Student – SJCT Palai

Feb 2023 – Dec 2023

- Joined as Co-Technical lead in 2023 and taught RPA tools
- Traveled around kerala and conducted many workshops on UI Path tools

Web Developer, IEEE – SJCT, Palai

June 2022 – June 2023

- Developed and maintained IEEE website and organized many events
- Volunteered in IEEE Kochi Hub event 2022

Projects

Beckn Packages

npmjs/beckn-typescript

- Developed a set of packages for Beckn protocol in TypeScript, Python & Go-Lang to improve developer experience
- Tech Stack: TypeScript, Python, Go-Lang

Helios AI Browser

github/helios-browser

- Developed an open source alternative of ARC browser with integrated AI tools
- I Integrated GenAI into browser at India FOSS Hackathon
- Tech Stack: TypeScript, QT, C++ , AI-SDK, Chromium, React

Radar - AI Surveillance Engine

github/radar

- Developed a major project for college, a web-app and a radar system that can detect objects in real-time using YOLOv8 and OpenCV
- The system can be used for various applications such as security, surveillance, and traffic monitoring
- Tech Stack: TypeScript, Python, FastAPI, OpenCV, Tkinter, React, Supabase, Yolo-v8

Asthra - Tech Fest Website

asthra.sjcetpalai.ac.in

- Developed a robotic 3D interactive website for the national level technical fest, with dashboard for event management, registration and ticketing.
- Tech Stack: Nextjs, Supabase, TailwindCSS, ThreeJS, Framer Motion, tRPC, Redis, Cloudflare

LuttAPI - Open source alternative to v0

luttapi.vercel.app

- Developed a SaaS for instantly generating & deploying frontend UI with API endpoints or JSON
- Tech Stack: Nextjs, AI-SDK, Redis (Upstash), TailwindCSS, Framer Motion, tRPC, Github Actions, Anthropic Claude

FileSphere - AI for Drive & File Management

nexus-sjcet/filesphere.ai

- At a hackathon, developed an Action Model AI file management system that can categorize, search, and manage files based on user request by itself
- Tech Stack: Nextjs, LangChain, GO, tRPC, Llama3

Initiative - Vercel AI-SDK Extension

npmjs/initiative

- Developed and published library on NPM that turns Large Languages Models into Action Models for sequential function calling tool chain
- Tech Stack: LangChain, Zod, TypeScript, AI-SDK

MindEase - LAM

nexus-sjcet/mindease

- Developed at Hackathon, a personal whatsapp bot with Action Model AI that can perform health care assistances
- Tech Stack: Python, LangChain, Prisma, FastAPI, Mistral AI

MultiMedia Commenting Vscode Extension

nexus-sjcet/voice-it

- Developed at Hackathon, a vscode extension that allows multi-media commenting (img, voice, gif etc) inside any code file
- Tech Stack: TypeScript, Vscode API

Scriptw - REPL Notebook for Javascript

rajatsandeepsen/scriptw

- Developed in-browser Jupyter Notebook alternative for Javascript
- Tech Stack: JavaScript, CodeMirror, Nextjs, Prisma

Transaction - AI enabled Banking App

rajatsandeepsen/transactions

- Developed hands free banking app that can be controlled using Voice as Engineering Mini-Project
- Tech Stack: Nextjs, LangChain, Supabase, tRPC, Llama3, DrizzleORM, Zod

Magic-UI CLI

magicui.design

- Developed a registry & CLI for open source project MagicUI (library for Design Engineers)
- Tech Stack: Nextjs, Zod, Commander, TypeScript, TailwindCSS, Framer-Motion

Additional Achievements And Awards

#BuildWithAI International Hackathon (2025): Secured Fifth prize by building Multi-Model AI for online news

Satwa National Level Hackathon (2024): Secured First Runner-Up by building Action Model AI for health care assistance

Beyond-the-Loop Hackathon (2024): Secured First place by building Drive.AI, a Google Drive file system with AI capabilities

Publications

Simple Action Model: Enabling LLM to Sequential Function Calling Tool Chain

Dec 2024

IEEE Xplore - 10893677

Technologies

Languages: TypeScript, Python, SQL, C++ , Java, JavaScript, HTML, CSS

Frameworks: Nextjs, Expo, TensorFlow, Sklearn, OpenCV, Tkinter

Libraries: Reactjs, React-Native, Expressjs, TailwindCSS, LangChain, DrizzleORM, Prisma, tRPC, Better-Auth, Hono, FastAPI, Pandas etc

Softwares: Docker, Bun, Nodejs, PostgreSQL, Nodejs, Redis, Kubernetes, UI Path

Developer Tools: Zed, Vscode, Git, Github, Figma, Hoppschotch, Ollama, WSL