

# G Abin Roy

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Software Developer with strong full-stack expertise and a research-driven mindset, experienced in building scalable applications across web, mobile, and AI/ML systems. Proficient in React, React Native, Flutter, Django, Fast API, Firebase, and Python-based machine learning workflows. Developed impactful products including DigiCollege and TaskNexus, along with a production-ready personal portfolio platform. Skilled in translating complex problems into practical solutions, collaborating across teams, and delivering end-to-end systems from design to deployment, with a growing focus on applied AI and LLM-based systems.

## Education

**B.Tech St. Thomas Institute for Science & Technology (KTU)**, Computer Science & Engineering Nov 2022 – May 2026

- **Coursework:** Data Structures, DBMS, Operating Systems, Computer Networks, Theory Of Computation

## Experience

**Freelance Developer** (Full Stack) Trivandrum, Kerala  
April 2024 - Present

- Delivered end-to-end software solutions including mobile apps (Flutter / React Native ), web apps (React/Next.js), and backend systems using FastAPI and Django, building scalable REST APIs and authentication systems for multiple clients.
- Developed and deployed REST APIs using FastAPI, handling authentication, data processing, and client-server communication.
- Managed full project lifecycle: planning → development → testing → deployment → maintenance.
- Used Git, Agile workflows, and version control best practices to maintain code quality and collaboration.

**Richinnovations**, AI / ML Intern Trivandrum, Kerala  
May 2025 - June 2025

- Applied core AI/ML principles, from data cleaning to model training, on real-world projects.
- Received hands-on training in Python (NumPy, Pandas, scikit-learn) for ML development.
- Completed a project on Image Recognition, applying preprocessing, feature extraction, and supervised learning models.

**Robious Innovations**, Research Intern (AI /ML Domain) Trivandrum, Kerala  
November 2025 - Present

- Engaged in applied AI/ML research involving problem formulation, hypothesis-driven experimentation, and critical evaluation of model behavior.
- Analyzed data and learning outcomes to iteratively refine experimental approaches, emphasizing robustness and methodological soundness.
- Demonstrated strong research aptitude by translating abstract machine learning concepts into structured experimental workflows under confidentiality constraints.

## Publications

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### LLM Based 3D Avatar Assistant

April 2024

Kevin Sujith John, **G Abin Roy**, Bindhya P S

[doi.org/10.1109/ICTEST60614.2024.10576146](https://doi.org/10.1109/ICTEST60614.2024.10576146) 

## Projects

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### Personal Portfolio

[Github Repo](#)   
[Live Demo](#) 

- Designed and developed a responsive, component-based portfolio using Next.js (migrated from React) to leverage server-side rendering and improved performance.
- Implemented dynamic project rendering with optimized loading and SEO enhancements.
- Built a custom CMS module for managing portfolio content locally, using middleware-based routing and configuration.
- Deployed on Vercel with optimized build configuration and seamless CI/CD integration.
- Tools & Technologies: Next.js, React, HTML/CSS, Vercel, Middleware

### DigiCollege

[Github Repo](#) 

- Led a team to design a college portal app with Flutter (frontend) and Django (backend).
- Implemented secure login, video-based attendance tracking, and timetable management.
- Tools & Technologies: Flutter, Django, Firebase

### Yukthi'26 Official Website

[Live Demo](#) 

- Developed the official website for Yukthi'26, a large-scale college technical and cultural event.
- Implemented SEO best practices using Next.js, including optimized metadata, semantic HTML, and improved page structure for better search visibility.
- Built responsive and reusable UI components, ensuring consistent performance across devices and screen sizes.
- Tools & Technologies: Next.js, React, HTML5, CSS3, JavaScript (ES6+), SEO Optimization

### TaskNexus

[Live Demo](#)   
[Github Repo](#) 

- AI-powered SDLC optimization platform integrating Scrum and Secure SDLC practices.
- Role: Researcher & Project Manager – driving sprint planning automation and velocity tracking.
- Tools & Technologies: React, Django, AI/ML workflows

## Technologies

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**Programming Languages:** Python , C , JavaScript , C++

**Frameworks & Tools:** React , Next.js , React Native , Flutter , Django , Fast API , Firebase , Git, Agile

**Other Skills:** Secure SDLC practices, System Security concepts, Research in AI-driven SDLC