

# Balkishan Bajpay

Full Stack Developer | Researcher | Software Engineer

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## Experience

### Frontend Developer

Dec 2024 - Feb 2025

CODEXP

Imphal, Manipur

- Developed a responsive tourism website for Keibul Lamjao National Park, ensuring a scalable frontend.
- Enforced strict type safety to prevent runtime errors & boost UI performance, with projected **40%** booking efficiency gains.
- Enhanced user experience through iterative **Agile development**, resulting in a **20-35%** improvement in user engagement.
- Technologies:** Next.js, TypeScript, Tailwind CSS, Redux Toolkit, shadcn/ui, chart.js

## Education

### Indian Institute of Information Technology Senapati

Nov 2022 - May 2026

Bachelor of Technology in Computer Science; CGPA – 8.40

Imphal, Manipur

**Courses:** Data Structures & Algorithms, Artificial Intelligence, Computer Network, Database Management System, Operating System, Information Retrieval, Data Communication and Internet Protocols, Natural Language Processing

## Publications

### Leveraging Pathfinding Algorithms for Efficient Metro Routing and Scheduling 📄

Mar 2025

- Published in **IEEE International Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation (IEEE-IATMSI 2025)**. 📄
- Awarded **2nd position** in **Best Research Paper Award** under the track IT-enabled Management for Social Change. 📄
- Selected from **2,800+** research submissions worldwide, with a highly competitive **acceptance rate of less than 20%**.

## Projects

### Metro Routing & Scheduling System | Dr. Dennis | C++, STL, OR-Tools 🐙

Aug 2024 - Nov 2024

- Boosted metro navigation with **Dijkstra & A\* algorithm** using heuristics, enhancing path-finding efficiency by **44.86%**.
- Streamlined scheduling, cutting travel delays by **23%** & boosting throughput, benefiting **10-15%** of urban transit system.
- Implemented real-time adjustments to metro schedules, **reducing idle time** and improving operational efficiency.

### EduNexus - EdTech Platform | React.js, Express.js, MongoDB, Tailwind CSS 🐙 📄

Dec 2024 - Feb 2025

- Engineered a highly scalable EdTech platform with secure authentication, course management, and payment integration.
- Optimized backend performance, significantly reducing API response time by **25%** and boosting user engagement by **30%**.
- Designed a modern responsive UI/UX with interactive dashboards, ensuring accessibility and improved retention.

### TalentAlign - AI Powered Job Matching Portal | Next.js, Express.js, Python, Selenium 🐙 📄

Mar 2025 - Present

- Scraped job details from web-portals and Telegram channels using Selenium and Telethon with **77-94%** accuracy.
- Enhanced user experience with automated resume parsing & AI cover letters, increasing application efficiency by **67%**.
- Engineered semantic indexing solution that resolved terminology ambiguities and optimized search performance.

## Skills

- Languages:** Proficient in C++, JavaScript | Familiar with C, Java, TypeScript, SQL, Bash, Python, PHP, HTML & CSS
- Frameworks & Libraries:** Tailwind CSS, React.js, Node.js, Next.js, Express.js, Django, Redux, Axios, shadcn/ui
- Databases & Tools:** MySQL, SQLite, MongoDB, Git, GitHub, IntelliJ, Postman, Apache
- Soft Skills:** Leadership, Event Management, Writing, Public Speaking, Time Management
- Exposure:** LaTeX, MySQL Workbench, NI Multisim, Octave, Bootstrap, Wireshark, Linux, JWT, chart.js

## Achievements

- Winner of **Smart India Hackathon 2024 (SIH'24)** organized at IIT Gandhinagar. 📄 Dec 2024
- Secured the **1st** position in the **Cyber Security Quiz**, a national-level contest by Data Pro Pvt. Ltd. 📄 May 2024
- Achieved **3rd position** in the **Ahouba'24 Techfest Hackathon**, competing among top teams. 📄 Apr 2024
- Contributed to multiple open-source projects as a **Hacktoberfest 2024** contributor. Oct 2024
- Achieved a **CodeChef rating above 1400**, demonstrating strong competitive programming skills. 📄 2025
- Ranked **2nd** in the **CSE department** with a **9.41 SPI** in the **5th semester**. 📄 Dec 2024

## Position of Responsibility

### Development Coordinator 📄

Sep 2024 - Present

Google Developer Group (GDG) IIIT Manipur

IIIT Senapati

- Guided & mentored **400+** students into the world of web development through structured events and hands-on workshops.