Balkishan Bajpay

Full Stack Developer | Researcher | Software Engineer

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Experience

Software Engineer (Intern) **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)**.⚿
- 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%**.

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, Linux

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.

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.