# Mihika

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## EDUCATION

Indian Institute of Technology, Patna

Bachelor of Technology - Computer Science and Engineering — CPI: 7.59

Patna, Bihar

2023 - Current

DAV ACC Sr. Sec. Public School, Lakheri

CBSE — CLASS XII — Percentage: 95.8%

Rajasthan 2022

DAV ACC Sr. Sec. Public School, Lakheri

CBSE — CLASS X — Percentage: 94.5%

Rajasthan 2020

#### Projects

• SaveSmart - Expense Tracker App (Ongoing): Developing a full-stack expense tracking application to help users manage their finances efficiently. Implementing features like secure login/signup, currency selection, transaction logging (monthly and financial reports), income-expense management, detailed budgeting, and a customizable user profile, dark theme support. Enhancing user experience with security settings, theme customization, and help support. Building a scalable backend for secure data storage and efficient transaction management.

Tech: Android Studio, Kotlin, Firebase, Jetpack Compose & Figma

- Indian Railway Ticket Reservation System (April'25): Designed and implemented a relational database for a railway reservation system with features like PNR tracking, waitlist management, multi-class booking, and refund processing. Created ER diagram, normalized schemas, and implemented complex SQL queries, procedures, triggers, and indexing for optimized performance. Developed support for real-world constraints including seat availability, concessions, and cancellation workflows. Tech: MySQL, SQL, Database Design & Figma/Canva
- Suika AI (AI-Powered Puzzle Game) (March '25): Developed an automated version of the Suika Game (Japanese puzzle) using reinforcement learning (Q-learning) to optimize fruit-merging strategies. Engineered physics-based interactions (Pymunk) for realistic collisions and gravity simulation, and built a dynamic GUI (Pyglet) with real-time previews and score tracking. Collaborated in a 5-member team to integrate AI logic with game mechanics, achieving seamless gameplay and strategic depth.

Tech: Python, Pymunk, Pyglet, Reinforcement Learning (Q-learning), Game Development

• CodeCraft Assistant (AI-Driven Game Development)(for CRISIL Build.Disrupt.Win Hackathon) (February'25): Developing an AI-powered software solution to automate app development, enabling rapid creation of business-specific applications. Integrating privacy and security features through Natural Language Processing(NLP), Large Language Model(LLM), and open-source technologies. Building an autonomous agent for end-to-end development, from coding to testing, including automated test case generation, execution, and providing detailed feedback for enhanced efficiency.

Tech: React, JavaScript, Python, PyTorch, Figma, Vercel & VS Code

• Library Management System (March '24): Developed a program with the features of authentication like user login, register, issue book, return book, show available books.

Tech: C & VS Code

#### SKILLS SUMMARY

- Programming Languages: C++, C, Python, HTML, CSS, JavaScript, SQL, Kotlin, Verilog
- Frameworks and IDEs: Android Studio, Node.js, React
- Design and Productivity Tools: Adobe Photoshop, Canva, Figma, LaTeX, Overleaf, Microsoft Teams, Zoom
- Platforms and Operating Systems: Linux, Windows, Web, Arduino
- Soft Skills: Leadership, Public Speaking, Teamwork, Creative Writing, Organizational Skills, Perseverance

#### EXPERIENCE

- Completed Student Upskilling Launchpad Program by Google May 2025
- Completed Graphs Programming Camp organized by AlgoUniversity December 2024

### Achievements

- Represented IIT, Patna in Inter IIT Cultural Meet 7.O as a Contingent of Epicurean, Culinary Club of IIT Patna and secured first position - 2024
- Secured All India Rank(AIR) 5229 in JEE Advanced. 2023
- Pupil with a rating of 1310 on Codeforces Handle: mihikas02 Present

# Position of Responsibility

• Coordinator, Web Development Committee, HoSCA, IIT Patna	2025 - Present
$\bullet$ Coordinator, Hospitality & Logistics Committee, TEDxIITPatna	2025 - Present
• Coordinator, Media & Public Relations, Anwesha, IIT Patna	2025 – Present
Volunteering	
NSS, IIT Patna Volunteer Activities	2023 - 2024
Registration, Security & Planning Committee, Anwesha IITP  Committee Member	2023 - 2024
Media & Public Relations Committee, Celesta IITP  Committee Member	2023 - 2024