# PIYUSH KUMAR

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## EDUCATION

**Birla Institute of Technology, Mesra (Off Campus, Patna)** Aug 2022 – Present
*B.Tech in Electronics and Communication Engineering (Expected Graduation: May 2026)* *CGPA: 6.75*

**B.D. College Patna** 2021
*Class 12th* *72.4%*

**DAV BSEB Patna** 2019
*Class 10th* *79.8%*

## EXPERIENCE

**PeakStreak Pvt. Ltd.** June 2025 – July 2025
*Intern, Software Development* *Remote*

Developed a full-stack CRM platform using **React.js**, **Node.js**, and **MySQL**, boosting operational efficiency by **30%**.
Engineered over **20 RESTful API endpoints** for data manipulation and retrieval, ensuring seamless communication between the frontend and backend.
Collaborated in an **Agile team of 5** to translate business requirements into technical specifications and production-ready code within **2-week sprints**.

## TECHNICAL SKILLS

**Languages**: C++, C, Python
**Libraries Frameworks**: Scikit-learn, Pandas, NumPy, OpenCV, YOLOv8
**Web Development**: HTML, CSS, JavaScript, React, Node.js, Express.js
**Databases**: SQL
**Tools Platforms**: Git, GitHub, VS Code
**Core Concepts**: Data Structures and Algorithms, Database Management System, Operating System

## PROJECTS

**FitMind: Full-Stack AI Microservice Application** *React.js, Node.js (Express), Hugging Face Transformers, MySQL*
Architected a full-stack web application with a **microservice-oriented backend**, where a Node.js orchestrator communicates with two dedicated **Python (Flask)** microservices for AI model inference.
Implemented a complete AI pipeline that performs NLP-based emotion detection with **90% accuracy** and programmatically generates personalized responses via external generative AI APIs.

**Human Detection & Counting System** *Python, YOLOv8, OpenCV, Electron, SQLite*
Constructed a real-time human detection and counting application using the YOLOv8 model, achieving over **95% accuracy**.
Built a responsive, cross-platform desktop GUI using **Electron.js** for user interaction and data visualization.
Integrated an **SQLite** database for persistent storage of tracking data, managing over **10,000 data points** for analysis.

**Diabetes Prediction System** *Python, Scikit-learn, Streamlit*
Trained and evaluated a machine learning model using Scikit-learn to predict diabetes with **88% accuracy**.
Applied comprehensive data preprocessing and feature engineering on a dataset of over **700 patient records**.
Deployed the model as an interactive web application using **Streamlit**, achieving prediction latency of **under 500ms**.

## ACHIEVEMENTS

**Adobe India Hackathon 2025:** Advanced to the prototype development round after clearing the national-level coding assessment, placing among the 50 shortlisted teams from a pool of over 260,000 participants.
**DSA Proficiency:** Solved 350+ coding problems, showcasing expertise in data structures and algorithms.
**PRMO Qualification:** Qualified for the Pre-Regional Mathematical Olympiad, recognized as a national-level competition for mathematically talented students.
**NTSE Stage 2:** Advanced to the second stage of the National Talent Search Examination, highlighting strong academic excellence at a national level.