Bhavesh Goyal

B.Tech, Data Science and Engineering, IIT Mandi

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EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech.	Indian Institute of Technology, Mandi	7.90 (Current)	2022-2026 (Expected)
Semester Exchange	Technische Universität Darmstadt, Germany	8.31	Sep 2024 - Mar 2025
Senior Secondary	CBSE	96.2%	2022

EXPERIENCE

- **Otsuka Corporation, Japan** *May 2025- July 2025*
  Software Developer Intern
  - Architected a modular **B2B Sales Automation Platform** leveraging FastAPI, PostgreSQL, and Elasticsearch.
  - Engineered an **intelligent AI service factory** supporting Azure OpenAI and HuggingFace.
  - Implemented conversational agents and **Natural Language Processing** techniques for quotes, product search, content extraction; optimized with intelligent caching and async processing.
  - Established live configuration system via admin UI for customizing personas, responses, and industry behavior.
  - Orchestrated deployment with **Docker**, **Nginx**, **CircleCI** on Azure VMs; monitoring via Grafana and Kibana.

- **Zelta Labs** *Oct 2023- Dec 2023*
  Inter IIT Tech Meet
  - Formulated **3 algorithmic trading strategies** across timeframes (15-min, 4-hour, 8-hour) optimizing cryptocurrency profit prediction for Ethereum, Bitcoin, Dogecoin, Matic.
  - Integrated **sentiment analysis** encompassing fear-greed indices, market expectations, decision-making psychology.
  - Achieved **32-fold profit amplification** over 4-year backtesting period through systematic strategy optimization.

TECHNICAL SKILLS

- **Programming Languages**: C, C++, Python, Java, SQL, HTML, CSS, JavaScript, TypeScript
- **Libraries & Frameworks**: Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, Transformers, PyTorch, TensorFlow, Elasticsearch (Information Retrieval), NLTK/Spacy (Natural Language Processing)
- **Development & API Integration**: REST API Development, Data Pipeline Creation, Frontend-Backend Integration
- **Cloud Technologies & DevOps**: Microsoft Azure, Container Orchestration, Model Deployment, Prompt Engineering

PROJECTS

- **Stratos - Intelligent Weather Application** *[GitHub](#)*
  Kotlin, Jetpack Compose, MVVM, Machine Learning Integration, REST APIs, Room Database, WorkManager
  - Designed **comprehensive weather forecasting system** in Kotlin with Jetpack Compose, MVVM architecture, Weather-API integration, offline caching, and multi-sensor location tracking.
  - Developed **computer vision sky analysis** via **Google Gemini** API for real-time cloud pattern recognition, atmospheric prediction, and weather phenomena detection.

- **GeoAI Reimagined** *[GitHub](#)*
  Deep Learning, Transfer Learning, Image Segmentation, PyTorch
  - Conducted **geospatial analysis** through deep learning models for land classification, flood detection, crop monitoring, biomass estimation, building segmentation, and burn scar identification, achieving **94.8% accuracy**.
  - Constructed automated **disaster management pipeline** employing transfer learning and model fine-tuning.

- **Railway Track Inspection Bot** *[GitHub](#)*
  Computer Vision, Machine Learning, Arduino, Raspberry Pi
  - Supervised team of 6 engineers to construct crack detection system with **custom YOLOv8 model**.
  - Built system architecture using sensor fusion, camera systems, Node MCU, and Raspberry Pi for distributed, real-time crack detection and achieved **92% detection accuracy**, under a budget of INR 30K.

POSITION OF RESPONSIBILITY

- **Startup Head**, Entrepreneurship Cell, IIT Mandi *Sep 2024 - Present*
- **Hostel Maintenance Coordinator**, IIT Mandi *Oct 2023 - May 2024*
- **Event Head**, Exodia'23, Cultural Festival of IIT Mandi *Mar 2024 - May 2024*
- **Head of Sponsorship**, Himalayan Startup Trek'23 *Sep 2023 - Oct 2023*

AWARDS AND ACHIEVEMENTS

- **NASA SpaceApps'23**: Recognized as **Global Runner-up** and **Regional Winner** in GeoAI Reimagined Challenge, surpassing 155,000 worldwide participants through pioneering geospatial analysis models.
- **Amazon ML Challenge 2024**: Secured AIR-67 ranking among 75,000 participants across India.
- **J.P. Morgan Chase & Co**: Completed an online Software Engineering Job Simulation by Forage.
- **Inter IIT Tech Meet 12.0**: Represented the institute at Inter IIT Tech Meet 12.0, hosted at IIT Madras.