AYUSH KUMAR VERMA

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Education

Indian Institute of Technology (ISM), Dhanbad July 2024 - May 2026
M.Sc - Mathematics and Computing (GPA: 7.50 / 10) *Dhanbad, Jharkhand*

- **Relevant Coursework:** Data Mining, Database Management Systems, SQL, Operating Systems, Probability and Statistics, Data Structures and Algorithms, Data Analysis

Dr. Rammanohar Lohia Avadh University, Ayodhya July 2020 - June 2023
Bachelor of Science - Mathematics *Ayodhya, Uttar Pradesh*

- **Relevant Coursework:** Real Analysis, Numerical Methods, Linear Algebra

Work Experience

ZeTheta Algorithms, Mumbai May 2025 – Present
Data Science Intern

- Built AI models for career prediction and talent matchmaking—boosting candidate–employer compatibility by 30%.
- Developed NLP microservices (resume parsing, skill-gap analysis, job readiness scoring) and deployed via FastAPI into a Laravel backend on Supabase/Vercel.

Projects

Comprehensive Real Estate Intelligence Platform | *Python, ML, Data Visualization*

- Designed an interactive real estate analytics platform for Gurgaon, offering actionable insights **(ROI, rental yield, cash flow)**—empowering homebuyers and investors to make confident decisions.
- Built a feature sensitivity tool to simulate how property changes impact price—enhancing model transparency and aligning with real estate norms.
- Built a recommendation engine with **90% accuracy**, matching user-selected properties to similar listings.

SmartCare AI — AI-Powered Clinical & Mental Health Assistant | *Python, Transformers, Streamlit*

- Developed a multi-module healthcare platform with mental health detection, clinical diagnosis prediction, and an intelligent support chatbot for real-time user assistance.
- Trained BERT-based models on 5,000+ medical records, achieving **92.3% accuracy** and $<$**0.2 validation loss** in symptom-to-diagnosis classification.
- Integrated a responsive chatbot interface, simulating real patient support and improving user experience.

Customer Churn Prediction | *Python, Keras, Pandas, Scikit-learn, SHAP*

- Developed **3-layer ANN (64-32-1 nodes)** with dropout regularization, achieving **88% accuracy** and **0.94 ROC AUC** through architecture optimization.
- Engineered key features that boosted model performance by 15%, validated via EDA analysis.
- Achieved **85-91% precision** with fast, production-ready inference for real-time churn prevention via API integration.

Technical Skills

Languages / Libraries: Python, C++, Pandas, NumPy, Scikit-learn, Keras, TensorFlow, Transformers
ML / Deep Learning: ANN, CNN, BERT, Transfer Learning
Natural Language Processing (NLP): Text Preprocessing, TF-IDF, NLTK, NER
Frameworks / Tools: SQL, Streamlit, Git, Jupyter, Google Colab
Soft Skills: Analytical Thinking, Collaborative Problem-Solving, EDA, Data Cleaning

Courses and Certifications

- Data Science Mentorship Program - CampusX
- AI / Machine Learning Workshop - IIT Patna