

Kushal Bansal

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Education

Indian Institute of Technology, Bhubaneswar
B.Tech And M.Tech (Dual Degree) Civil Engineering

GPA: 8.29

Nov. 2021 - present

Prince Uch Madhyamik Vidyalaya
Senior School Certificate Examination, CBSE

Percentage: 85.6%

April 2018 - March 2020

Projects

AI Real Estate Agent

GenAI + NLP

- Developed a property recommendation agent using Firecrawl's Extract API and OpenAI GPT models, automating multi-site data extraction from 99acres, Housing.com, MagicBricks, and more.
- Engineered a location analysis module to provide price trends, rental yield, and investment insights across localities, enhancing decision-making for users.
- Built an interactive Streamlit interface with customizable filters (city, category, type, budget), enabling smart, user-friendly real estate search.

Virtual Voice Assistant

NLP

- Developed an end-to-end system using LangChain that translates natural language questions into SQL queries to interact with a MySQL database a T-shirt store.
- Implemented Few-Shot Learning to enhance the system's ability to generate precise queries, improving the accuracy and reliability of the responses.

Email Spam Classification

Deep Learning

- Developed an SMS spam classification model by fine-tuning BERT, achieving high accuracy in distinguishing spam from legitimate messages..
- Preprocessed a diverse dataset of SMS messages to train the model, ensuring robust performance across various text patterns.n.
- Implemented the model to enhance the detection of spam messages, improving the efficiency and reliability of SMS filtering systems.

Course Projects

Image Segmentation and Enhancement for Structural Health Monitoring

Deep Learning

- Developing advanced image segmentation and enhancement models using UNet, CNN, and GAN architectures for structural health monitoring..
- Aiming to improve the accuracy of detecting and analyzing structural defects by leveraging deep learning techniques.
- Enhancing image quality and segmentation precision to aid in the early identification and assessment of potential structural issues.

Key Skills

- Programming Languages:** C++, Python, SQL, HTML
- Tools:** AutoCAD, StaadPro, MS Excel
- Framework/Libraries:** NumPy, Panda, Tensorflow, Django, Scikit-Learn
- Soft Skills:** Critical Thinking, Problem Solving, Teamwork

Achievements

- Ranked 1st in the Quantitative Trading Competition organized by WorldQuant, demonstrating proficiency in financial analysis and quantitative skills
- Cleared the second level of E-Yantra, organized by IIT Bombay, demonstrating proficiency in robotics and problem-solving in competitive environments.
- Successfully solved over 200 Data Structures and Algorithms (DSA) questions at various online Platforms, showcasing problem- solving abilities and programming skills.

Extra-Curricular Activities

- Member of the 3rd Place Basketball Boys Team in the General Championship at IIT Bhubaneswar, showcasing teamwork and athletic achievement in a competitive university environment.
- Member of Kalakriti, the Fine Arts Society of IIT Bhubaneswar, contributing to cultural and artistic events on campus through creativity and artistic expression.
- Member of RISC (Robotics and Intelligent System Club) at IIT Bhubaneswar, actively participating in robotics competitions, workshops, and projects, enhancing technical skills and fostering innovation in robotics.