Chaitanya Bansal

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EDUCATION

Kalinga Institute of Industrial Technology (KIIT),   2022 – 2026 | Bhubaneswar
BTech - Electronics & Computer Science Engineering

SKILLS

Python, Java, HTML, CSS, JavaScript, ReactJs, NodeJs, MySQL, C programming, Machine Learning, Deep Learning, Computer Vision, DSA, OOP, Figma, DBMS, OS, Probability & Statistics, LLM, RAG, FastAPI, Gen AI

PROJECTS

Bell's Palsy Severity Detection   Nov 2024 – present

- Engineered a ResNet50-based CNN to classify Bell's Palsy severity into 4 levels, achieving **98.79% accuracy**, **F1: 0.99 (mouth)**, **97.50% accuracy, F1: 0.98 (eyes)**, and **94.18% accuracy, F1: 0.92 (eyebrows)**.
- Fine-tuned the last 20 layers of ResNet50 with transfer learning, optimizing training using Adam, cross-entropy loss, early stopping, and learning rate scheduling.
- Augmented **1,000+ images** (from 14,000+) with rotation, zoom, flip, and shear to improve generalization and address class imbalance.
- Evaluated model performance using confusion matrices, precision, recall, F1-score, and ROC-AUC; Optimizing for **real-time deployment** on mobile/web platforms.

Stock Price LSTM Forecasting   Apr 2025

- Engineered a 3-layer LSTM model (128-64-32 units) with dropout, batch normalization, and L2 regularization (0.001); achieved R^2 = **0.96**, **RMSE = 66.5**, and **MAE = 31.06**.
- Trained on 5,000+ data points using EarlyStopping and learning rate scheduling, reducing validation loss by **70%** and doubling convergence speed.
- Designed a time series pipeline with a 30-day lookback and MinMax scaling, improving model stability and reducing prediction variance by **15%**.
- Visualized outputs with Matplotlib to track trends, enabling a **10% decrease** in forecast deviation and improved interpretability.

Web Text Scraping/Analysis   Jun 2024

- Developed a Python script to scrape and analyze content from 100+ web pages using **BeautifulSoup**, **NLTK**, and **requests**.
- Extracted **250,000+ words**, calculating 15+ text metrics such as Fog Index, sentiment polarity, and subjectivity scores.
- Achieved **95%+ accuracy in text extraction**, processing each page in under 3 seconds and exporting results to clean **Excel/CSV** formats.

COURSES

Web Development Bootcamp- Udemy   **Data Science Bootcamp-Udemy**
HTML, CSS, Javascript, Node, React,   Math, Statistics, Python, Advanced Statistics
PostgreSQL, Web3 and DApps.   in Python, Machine and Deep Learning.

EXPERIENCE

Xebia IT Architects, Technical Intern   May 2025 – Jun 2025 | Gurugram

- Studied and implemented concepts in Generative AI, Large Language Models (LLMs), and Retrieval Augmented Generation (RAG) to build AI solutions.
- Developed APIs using FastAPI and created interactive AI-based web applications with Streamlit for model deployment.
- Worked extensively with Python to integrate GenAI models into backend services, optimizing workflows for AI application delivery.

National Informatics Centre(NIC) Government of India, Data Science Intern   May 2024 – Jul 2024 | Delhi

- Spearheaded the development of a digital platform aimed to empower India's 140M+ senior citizens (11% of the population, projected to exceed 20% by 2040), focusing on service accessibility and community engagement.
- Analyzed 20+ key user and service data points to drive insights that improved platform design and usability for the elderly.
- Acquired practical knowledge of data governance, user-centric design, and cross-functional collaboration to create inclusive digital solutions for elderly users.

EXTRA CURRICULARS

- Competed in the athletics relay sprint (100mx4) team and won multiple matches in a campus cricket tournament, demonstrating leadership, teamwork, and competitive spirit.
- Prototyped visual branding and logos for a self-startup concept during high school, demonstrating creativity and design skills.
- Coordinated logistics and operations for Kritarth, an annual sociocultural gala at KIIT with 1000+ registrations, and contributed to organizing Chimera, a cross-disciplinary event bringing together innovators from medical and non-medical fields.