Jatin Kumar Balchandani

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EDUCATION

• University of Petroleum and Energy Studies, Dehradun, India	2021 — 2025
• B. Tech in Computer Science Engineering	CGPA - 7.32
• Major: Artificial Intelligence and Machine Learning	Minor: Big Data analysis
• XII, CBSE - Percentage: 92%	2020 – 2021
• X, CBSE - Percentage: 92 %	2018 – 2019

CAREER OBJECTIVE

Aspiring Computer Science Engineer with a strong foundation in Data Science, Machine Learning, and Data Structures & Algorithms. Passionate about leveraging AI and Big Data to develop scalable, data-driven solutions that drive process optimization and informed decision-making.

WORK EXPERIENCE

IBM Pheme Software Pvt Ltd, Remote   June 2024–July 2024

Project Intern (**MEDICAL IMAGE SEGMENTATION FOR DISEASE DIAGNOSIS)**

- Engineered and optimized a U-Net model using TensorFlow, incorporating data augmentation and regularization techniques to enhance accuracy by 85.63%, reducing manual segmentation time by 67% (from 30 minutes to 10 minutes) per scan.
- Achieved accuracy of 85.63% with the U-Net model, significantly enhancing diagnostic efficiency in medical imaging.

Woreto Pvt. Ltd. - IT Intern   March 2024-May 2024

- Developed automated data extraction pipelines using Python, Beautiful Soup, and Selenium, streamlining data processing and web scraping operations, resulting in a 40% reduction in manual data handling time.
- Collaborated with cross-functional teams to identify project requirements and develop solutions.

PROJECTS

Swarm Algorithm for Drones (Jan 2024 – May 2024)

- Designed and implemented a Swarm Optimization Algorithm using AMP Planner to enable autonomous drone fleets to achieve optimal pathfinding with an 85% accuracy rate, reducing fuel consumption by 20%.
- Designed and developed well-structured, maintainable code to manage complex algorithmic logic for drone navigation.
- Performed unit testing on algorithm components to ensure robust and error-free navigation for drone fleets.

Py Spark Sentiment Analysis (May 2024)

- Utilized YouTube Data v3 API to scrape real-time comments data from videos, enabling dynamic data collection for sentiment analysis.
- Processed large volumes of unstructured data using PySpark, optimizing scalability and performance to handle extensive datasets efficiently. Developed a real-time Sentiment Dashboard using Streamlit, providing interactive visualizations of sentiment trends and insights for user engagement.

AI-Based Mock Interview Classifier (Jan 2025)

- Built an AI system to classify mock interview candidates based on **confidence levels** and **emotional states** using facial expression and tone analysis.
- Implemented **CNN-based emotion detection** and **NLP sentiment analysis** on transcribed answers to evaluate verbal and non-verbal behavior.
- Achieved **85%+ classification accuracy** and built a web interface for uploading interview recordings and generating feedback reports.

Skills

- **Programming Language:** Java, Python, C, HTML, CSS.
- **Databases**: MySQL
- **Technology and Framework**: Django, GitHub.
- **AI Libraries & Frameworks**: Keras, PyTorch, Scikit-learn, Pandas, NumPy, Matplotlib, TensorFlow
- **Data Science & Machine Learning**: NLP, Machine learning, Web Scraping (Beautiful Soup, Selenium), Data Structures and Algorithms, Object-Oriented Programming (OOP)
- **Soft Skills**: Strategic Leadership, Critical Thinking, Adaptability, Quick Learning.

Certifications

- **AI-102: Designing and Implementing Microsoft Azure AI (Artificial Intelligence) Solution:** Developed and deployed AI solutions using Azure, focusing on scalability, performance optimization, and integration with cloud services.
- **AMCAT**- Data processing specialist (11/2023 -Present)
- 100 Days of code challenge by ACM Club. Solving 200+ Leetcode problems.