Pratham Chopra
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EDUCATION

Northeastern University, Boston, MA 2027
Master in Applied Machine Intelligence

Jain (deemed to be) University, Bangalore, India 2024
Bachelors of Technology in computer science and engineering (AI&ML)
CGPA: 8.76/10

EXPERIENCE

Futurense Technologies, Bangalore, **India** 2024
Data Science Intern

- Cleaned and analyzed large datasets from Indian census, housing and healthcare sectors resolving missing values and inconsistencies.
- Visualized data to support healthcare policy, highlighting regions lacking hospitals beds and other facilities.
- Analyzed Seattle Airbnb data to extract insights on pricing, amenities and user reviews.
- Ensured data accuracy and integrity while working with large-scale datasets.

SKILLS

Programming: Python, SQL, HTML, CSS
Machine Learning: Scikit-learn, PyTorch, Keras, TensorFlow, LangChain, OpenCV, LLM,
Data Analysis and Visualization: Pandas, NumPy, Matplotlib, Seaborn, Power BI
More: Git, WordPress, Agentic AI, Docker
Languages: English, Hindi, Kannada

CERTIFICATIONS AND PUBLICATIONS

Certifications:

- Microsoft AI-900, Microsoft | 2024
- Post Graduate Program in Data Science and AI, International Institute of Information Technology | 2024
- Generative AI with LLMs, Deep Learning AI (Coursera) | 2023
- Machine Learning with Python, Cognitive Class (IBM) | 2023

Publications: AR in Fashion Industry (Authors: Dwaj Ranka, Pratham Chopra, Ranvir Mehta) 4th IEEE International Conference on Advances in Computing, Communication Control and Networking 2022

PROJECTS

Speech Emotion Recognition:

- Integrated noise addition and pitch stretching techniques into the data preprocessing pipeline.
- Engineered an LSTM model achieving 85.34% testing accuracy and 96.18% training accuracy.
- Utilized datasets including TESS, RAVDESS, CREMA, and SAVEE for comprehensive model training.

Docs Chat:

- Developed a full-stack AI application integrating document analysis and database querying.
- Implemented NLP capabilities to generate SQL queries, improving database query efficiency by 40%.
- Created a user-friendly interface, increasing data accessibility by 30%.

Researcher Chat Agent:

- Built full-stack AI app with Streamlit & Python, searching & analyzing up to 50 relevant arXiv papers per query with 99% accuracy.
- Implemented NLP (Hugging Face, Ollama) reducing research reading time by 300+ mins (5+ hrs.) and boosting efficiency by 75%
- Designed 95%-rated intuitive UI for seamless AI research interaction.

RSNA Intracranial Aneurysm Detection (Kaggle Competition – Top 300 Global)

- Processed 4,000+ 3D DICOM brain scans with optimized pipelines (down sampling, CT windowing, resampling), reducing per-series runtime from 25 min to <30 sec.
- Developed EfficientNet3D ensemble models with SE attention, focal loss, and 5-fold CV; applied mixed-precision training to handle class imbalance and GPU limits.
- Implemented TTA, k-fold ensembling, and memory-efficient batching.