CHAKRADHAR REDDY PEDDAVENKATAGARI

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EXPERIENCE

AI Engineer *Jan 2025 – Jun 2025*

Excl Solutions Pvt. Ltd., Bangalore, India (Remote)

- Applied machine learning techniques for TEM image analysis and particle detection, improving pipeline accuracy and performance by up to 80%.
- Developed an AI-powered internal chatbot to assist teams in accessing project documents and datasets efficiently.
- Received a Letter of Recommendation from the CEO for technical excellence and innovation.

EDUCATION

Masters in Computer Science and Engineering (AI/ML Track) *Aug 2025 – Jun 2027*

University at Buffalo, Buffalo, USA CGPA: 3.92 / 4

B.Tech in Computer Science with Specialization in Cloud Computing *Jun 2021 – May 2025*

SRM University, Chennai, India CGPA: 9.64 / 10

SKILLS

- **Programming:** Java, Python, SQL
- **AI and Machine Learning:** Machine Learning, Deep Learning, Computer Vision, NLP, LLMs, CNNs, LSTMs, Transfer Learning, Model Evaluation, Generative AI, Transformers
- **Frameworks:** PyTorch, TensorFlow, Keras, Scikit-learn, OpenCV, NumPy, Pandas
- **AI Engineering:** Model Training, Fine-tuning, Hyperparameter Tuning, Data Preprocessing, Data Augmentation, Model Deployment, Inference Optimization, API Integration
- **Cloud & Tools:** AWS, Git, GitHub, Jupyter, Google Colab, Docker
- **Web Basics:** HTML, CSS, JavaScript

PROJECTS

Biometric Authentication System – Encryption & Privacy

- Improved a biometric authentication system utilizing AES and RSA encryption, SHA-256 hashing, enhancing data security and integrity.
- Integrated blockchain-based validation to ensure the protection of sensitive user information from tampering.

Car Sales Prediction using PySpark (Big Data ML Pipeline)

- Built an end-to-end big data ML pipeline using PySpark for large-scale data preprocessing, feature engineering, and predictive modeling.
- Implemented classification (Logistic Regression) and regression (Random Forest) models for price tier prediction and price estimation.
- Applied scalable preprocessing techniques including outlier detection, feature encoding, and normalization using Spark MLlib.

Customer Churn Prediction using Machine Learning

- Developed an end-to-end machine learning pipeline to predict customer churn using feature engineering and supervised learning models.
- Applied data preprocessing, imbalance handling, and model evaluation techniques to improve prediction reliability.
- Performed comparative analysis of multiple models to identify optimal performance for business decision-making.

PUBLICATIONS

Neural Sequence-to-Sequence Modeling with Attention by Leveraging Deep Learning Architectures for Enhanced Contextual Understanding in Abstractive Text Summarization

- Designed a neural sequence-to-sequence model with attention for abstractive text summarization, improving contextual understanding and summary accuracy.
- View Paper: arxiv.org/abs/2404.08685

Efficient CAPTCHA Image Recognition Using Convolutional Neural Networks and Long Short-Term Memory Networks

- Engineered a CAPTCHA recognition system using CNNs and LSTMs, achieving 99.54% accuracy while handling complex CAPTCHA images.
- View Paper: ijsrem.com

ACCOMPLISHMENTS

- Performance Based Scholarships: 50,750 (2022–2023), 71,750 (2023–2024)
- iCAN Summit Scholarship 2024: Selected for international recognition; Treasurer, iCAN Chennai Chapter
- HackerRank: 5-star ratings in Python, C, and C++