# Revanth Parsa

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# Experience

Dhurin Jul'22 - Present

Business Analyst

• Empowered client insights by cross-referencing customer data with a government-sourced master database, enhancing understanding of the customer base

## Indian Private Sector Bank 2 (Dhurin Client)

Jan'24 - Present

Consultant

- Developed a recovery propensity machine learning model to predict the likelihood of payment from customers in the written-off pool, achieving a 3.5x to 5x lift in the best decile compared to the overall event rate
- Created a comprehensive dataset using both on-us and off-us customer credit history to equip field collection agents with tailored talking points tied to each customer's recovery propensity
- Designed a rule-based roll-forward model to predict customers at risk of missing the next month's EMI payment
- Built a multi-class classification model to predict whether customers in the current data pool of 2 consecutive missed EMIs are likely to pay one EMI or pay more than one EMI in the next month
- Applied XGBoost and Random Forest algorithms to build recovery propensity and multi-class classification models
- Implemented monthly monitoring of live models using CSI and PSI metrics for ongoing accuracy and stability checks
- Migrated 5+ SAS codes to PySpark on AWS SageMaker, reducing execution time by 75%
- Automated the monthly execution of recovery propensity models by creating Airflow DAGs for 7 products, reducing total execution time by 90%

# Indian Private Sector Bank 1 (Dhurin Client)

Jul'23 - Dec'23

Consultant

- Analyzed delinquency data consistency across internal records, NBFC data, and credit bureau reports
- Analyzed and estimated the expected lifetime of different retail portfolios by fitting probability distributions to monthly closure data, determining the average cohort lifetimes over 12 months for concise portfolio estimations
- Key contributor in converting 10+ vintage R codes to Python, with detailed comparisons and documentation

#### Education

#### Indian Institute of Technology, Jodhpur

Sep'20 - May'22

Master of Technology in Artificial Intelligence CGPA: 7.95

Jodhpur, India

#### Indian Institute of Technology, Guwahati

Jul'15 - May'19

Bachelor of Technology in Electronics and Communication Engineering CGPA: 6.92

Guwahati, India

#### **Projects**

### Multimodal Knowledge Graph Embeddings | Report

- Conducted a comprehensive study about the embedding techniques used for entities and relations in a knowledge graph
- Performed link prediction tasks on the multi-modal knowledge graph using 3 different embedding techniques

# Identifying Name of the Singer from Audio Data | Report

- Compiled a dataset of **500** songs from **10** artists, converting MP3 files to WAV format for consistent audio processing
- Processed audio files to generate 9,000+ spectrograms and mel-spectrograms from 30-second (4-6 per file) clips for feature extraction
- Leveraged three pre-trained CNN models VGG16, ResNet50, InceptionV3 to extract features from the spectrograms
- Trained an XGBoost classifier on 7,000+ samples, achieving 70% accuracy with single predictions and over 93% accuracy with top-3 predictions

#### Relevant Coursework

- Machine Learning
- Deep Learning
- Responsible and Safe AI
- Natural Language Processing

- Computer Vision
- Artificial Intelligence
- Data Analytics

#### Technical Skills

Languages: Python, R, C, PySpark

Frameworks: PyTorch, TensorFlow, Keras, Scikit-Learn, Airflow

Libraries: NumPy, Pandas, Statsmodels

Databases & Cloud Technologies: MySQL, Amazon S3, Amazon EC2, Amazon SageMaker