Chaitanya Patil

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EDUCATION

Rochester Institute of Technology (GPA 3.56/4) **08/2023 – 05/2025**
Master of Science Rochester, USA
Major in Information Technology and Analytics

Atharva College Of Engineering, Mumbai University (GPA 3.45/4) **08/2018 – 06/2022**
Bachelor of Engineering Mumbai, India
Major in Information Technology

RELEVANT COURSEWORK

Information Retrieval and Text Mining | Visual Analytics | Foundations of Data Science | Database Design | Data Warehousing | Non-relational Data Management | Database Management Systems | Artificial Intelligence | Data mining and Business Intelligence.

TECHNICAL SKILLS

- **Machine Learning & AI:** Predictive Modeling, Time Series Forecasting, Anomaly Detection, LLMs (LLaMA 2), Hugging Face Transformers, Logistic Regression, TensorFlow, PyTorch, Ray.
- **Data Science & Analytics:** Python, R, SQL, Pandas, NumPy, Scikit-learn, ETL Pipelines, Big Data Processing
- **Cloud & DevOps:** AWS (S3, Redshift), Azure SQL, MySQL, Git, Bitbucket, Flask, GitHub Actions
- **Visualization & Reporting:** Tableau, Power BI, Plotly, Seaborn, Matplotlib, Excel
- **Software Development:** Java, C++, REST APIs, Agile Development
- **Data Quality & Automation:** Data Profiling, Bias Detection, Process Optimization, Root Cause Analysis, Statistical Testing

PROJECT & RESEARCH

Stock Trend Analysis and Prediction for EV Companies
- Developed Flask-based web app for real-time EV stock trend forecasting using LSTM models, achieving 85% prediction accuracy across 6-month timeframes.
- Processed and analyzed 10+ years of historical data from 7 EV companies, implementing anomaly detection and time series modeling.
- Designed dynamic dashboards with Plotly to visualize stock correlations, trends, and anomalies in a responsive interface.

EPL Player Wage and Performance Analysis
- Built a Tableau dashboard analyzing wage-to-performance metrics for 500+ players across 20 EPL teams over 4 seasons.
- Identified that top 10% earners contributed to 35% of team performance variance, aiding in strategic player investment.
- Recommended optimized wage structures that could improve budget efficiency by 20% based on predictive insights.

AI Model Optimization & Quantization for Efficient Inference
- Implemented quantization and model compression for CNNs in PyTorch, reducing model size by 45% and inference time by 2.1x.
- Applied static quantization and layer fusion, enabling edge deployment on resource-constrained environments without accuracy loss.
- Benchmarked models to maintain 92% accuracy post-optimization, ensuring minimal trade-off for efficiency.

LLM-Powered Data Risk Auditor
- Developed a Streamlit-based data auditing app powered by LLaMA 2 (via Ollama) to identify data risks, biases, and anomalies in structured datasets up to 1GB.
- Engineered modular Python scripts for dataset profiling, correlation analysis, and LLM-based reasoning; flagged sensitive fields, missing values, and class imbalances.
- Built animated, glowing UI with auto-theming and smooth transitions, improving user interaction and interpretability for non-technical users by 40%.

EXPERIENCE

Full-Stack Web Developer Intern
Null Class, Mumbai **12/2022 – 02/2023**
- Designed automated dashboards to monitor and analyze real-time system performance data for manufacturing workflows.
- Developed full-stack applications for automation systems, improving operational efficiency by 30%.
- Integrated machine learning models to detect quality control failures using Python.

Data Science Intern
Let's Grow More, Mumbai **09/2021 – 10/2021**
- Optimized scalable data pipelines using Python, increasing data-driven decision-making efficiency by 40%.
- Created automated ETL scripts, improving data processing efficiency by 35% and ensuring data accuracy.

Machine Learning Intern
Dev Incepts, Mumbai **07/2021 – 08/2021**
- Implemented predictive analytics models (Logistic Regression, Gradient Boosting) to optimize operational processes.
- Automated decision-making workflows, saving 15+ hours per week for the analytics team.
- Refined hyperparameter tuning scripts, elevating model accuracy by 12% and reducing computational overhead.