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Chamodh Chiranthana

Intern AI/ML Engineer

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Aspiring AI/ML Engineer with practical experience in data preprocessing, model development, and predictive analytics. Strong foundation in Python, machine learning, and data-driven problem solving, with a keen interest in automation and cloud technologies. Passionate about building scalable, interpretable, and ethical AI systems that deliver real-world impact.

Skills

Programming & Tools	Python, Java, SQL, Git, scikit-learn, pandas, NumPy, Tableau
Machine Learning & AI	Supervised & Unsupervised Learning, Model Training & Evaluation, Feature Engineering, Predictive Modeling, Hyperparameter Tuning
Data Engineering	ETL Pipelines, Data Preprocessing, Automation, Data Wrangling, REST APIs
Data Analysis & Visualization	Exploratory Data Analysis (EDA), Statistical Analysis, Visualization Dashboards
Soft Skills	Problem Solving, Team Collaboration, Clear Technical Communication, Documentation

Technical Experience

Data Science Intern **Jun 2025 – Present**
Management Systems (Pvt) Ltd. — Payroll Management Division *Colombo, Sri Lanka*

- Designing an automated reporting system for company-wide provident fund (PPF) performance, generating LaTeX-based fund reports from payroll and fund transaction databases.
- Analyzing SQL/Oracle databases of PPF records to determine which KPIs (contributions, withdrawals, returns, loan exposure, coverage ratios) should appear in reports and writing reusable queries/views to compute them reliably.
- Implementing a FastAPI backend to orchestrate data extraction, metric aggregation, Gemini API–driven narrative generation, and LaTeX compilation into PDF reports that explain overall fund health (e.g., "is the fund improving or deteriorating?").
- Collaborating with finance, HR, and IT stakeholders to validate metrics, report layouts, and explanatory narratives, replacing ad-hoc manual reporting with a reproducible, data-driven workflow.

World History Search Pipeline – Semantic RAG System **2024 – Present**
Personal Project

- Designed an end-to-end semantic search pipeline that transforms world history textbooks into a vectorised knowledge base for question answering and AI-powered tutoring.
- Implemented modular PDF extraction, text cleaning, and semantic chunking workflows in Python using `pymupdf`, `nltk`, and `sentence-transformers` (`all-MiniLM-L6-v2`).
- Built a `ChromaDB`-backed vector store with chapter/page metadata to enable fast similarity search and grounded retrieval with citations.
- Prototyped retrieval-augmented generation (RAG) flows with the `Gemini` API, exposing the system through notebooks and a backend/frontend scaffold for future web deployment.

Employee Churn Prediction – HR Analytics **Aug 2025**
Personal Project

- Built and compared multiple ML models (`Logistic Regression`, `Random Forest`, `XGBoost`) to predict employee churn, achieving strong ROC-AUC performance with XGBoost.
- Engineered features from 15K+ employee records—spanning tenure, performance, and compensation—to quantify attrition risk.
- Interpreted model outputs via feature importance analysis, identifying primary churn drivers and HR intervention points.
- Delivered actionable retention insights through concise reporting and data visualizations.

Education

University of Westminster, London, UK Expected 2027
Bachelor of Computer Science, Major in Computer Science; Minor in Mathematics
Relevant Coursework: Machine Learning & Data Mining, Database Systems, Object-Oriented Programming

Informatics Institute of Technology, Colombo, Sri Lanka 2021 – 2022
Foundation Certificate of Higher Education: Mathematics for Computer Science, Python Programming, Computer Systems

Certifications

IBM Data Science Professional Certificate	Coursera — IBM Skills Network	2025
Google Advanced Data Analytics Certificate	Coursera — Google Career Certificates	2025

Activities

- Author, Data Science Blogs on Medium 2025 – Present 2025 – Present
- Participant, Kaggle Competitions Online Coding Sprints 2024 – Present