

EDUCATION

- Jan'23 – Dec'24 Master of Data Science**
University of Adelaide, Australia
- **GPA:** 6.917/7.
 - Adelaide Graduate Award: Employability skills acquired in extra-curricular activities.
 - The Executive Dean's Recognition and Global Citizens Scholarship: Academic merit.
- Jul'18 – May'22 Bachelor of Technology in Electronics and Communication Engineering**
Vellore Institute of Technology, India
- **CGPA:** 8.88/10.

EXPERIENCE

- Jul'25 – present AI Software Developer Intern**
The Ark Accounting Corp., Sydney
- Responsibilities**
- Built and deployed FastAPI-based internal APIs to automate invoice processing and report retrieval, reducing manual task time by **~25%** during testing.
 - Investigated Model Context Protocol integration for agentic AI use in accounting workflows, reviewing **40+** tools and outlining whitelisting strategy for safe orchestration.
- Feb'25 – present Academic Tutor**
University of Adelaide, Adelaide
- Responsibilities**
- Delivered workshop and practical sessions for Statistics & Numerical Methods, Electronic Systems and Analog Electronics to over **1100** students across **12** weekly sessions, fostering collaboration and diversity.
 - Graded **100+** assignments and lab reports per week with integrity, providing fair and constructive feedback to improve student understanding.
- Nov'24 – May'25 Data Science Research Intern**
University of South Australia, Mawson Lakes
- Responsibilities**
- Reviewed **30+** academic and industry publications, a comprehensive literature survey on indigenous food and sentiment analysis, establishing a solid foundation for data-driven research.
 - Collaborated with supervisors to define **3+** project objectives, implemented Selenium-based web scraping techniques to extract **5000+** restaurant feedback entries, and outlined a machine learning framework to model consumer sentiment patterns.
 - Led research enhancing native food adoption by developing recommendation systems highlighting native ingredients, increasing customer interest by **12%**. The system also guided supply-chain improvements, driving sustainability and food security efforts, and helped shape policy-making.
- Aug'23 – Nov'23 Data Science Intern**
YourAnswer International Pty Ltd, Adelaide
- Responsibilities**
- Analysed **30,000+** internal audio files stored on AWS S3, extracted metadata from noisy log files, and addressed scaling bugs to enhance dataset usability. Used publicly available voice datasets to develop robust speaker verification models.
 - Researched, developed, and tested three PyTorch-based speaker verification models, selecting the best-performing (Precision: **97.8%**, Accuracy: **95.4%**) for integration into YourAnswer's 'Interactive Voice Banking' project as an MFA system.
 - Assessed model robustness by introducing AWGN and real-world noise datasets, achieving a competitive Precision of **94.5%** and Accuracy of **92.3%**.
 - Gained expertise in GPU computing, Linux Shell Scripting, and PyTorch through iterative model refinement. Documented key findings to facilitate scalability and knowledge transfer.
- Jul'21 – Aug'21 Data Science & Business Analytics Intern**
The Sparks Foundation, Gurugram, India
- Responsibilities**
- Performed exploratory data analysis on datasets with **100,000+** rows, uncovering trends to guide business insights using Python (Pandas, Matplotlib).
 - Built and deployed ML models (regression, clustering) with over **90%** accuracy on real-world tasks like student score prediction and customer segmentation.

PROJECTS

News Aggregator with GenAI Chatbot (Python, OpenAI API, GitHub Actions)

Results

- Developed Flask-based web application to ingest, summarise, and categorise **500+** Australian news articles weekly into finance, lifestyle, sports, and music domains.
- Built Retrieval-Augmented Generation (RAG) pipelines with OpenAI **GPT-4.1** and embedding-based retrieval to power the responsive news chatbot.
- Automated CI/CD with GitHub Actions and deployed on Render, attained **99.3%** uptime, while ensuring secure API key management.

Optimising the semi-Markov Model approach for Performance Analysis (Python)

Results

- Optimised the discovery of process models, realising **1.35x** speed improvement through CPU parallelism. Enhanced numerical operations, leading to **3x** faster functions.
- Researched and optimised hyperparameter usage, improving the KL Divergence metric by **2.54%** through systematic tuning and evaluation.
- Developed GPU-based parallelism foundations to enable further performance gain and support the processing of larger event logs.

Hybrid Models for Stock News Sentiment Analysis (Python, Telegram API)

Results

- Accumulated more than **1.4 million** financial headlines from Kaggle datasets. Compared Lexicon-based and Learning-based models for financial news sentiment analysis.
- Built a Hybrid Model, combining Harvard IV-4 with a Multi-Layer Perceptron, achieving an accuracy of **99.56%**, used to assign polarity to financial news headlines.
- Deployed as a Telegram ChatBot sharing information using API keys via the Heroku cloud platform, providing users with recent market sentiments of stocks.

Spotify's Song Genre Prediction (R Programming)

Results

- Performed Exploratory Data Analysis, identifying critical song features for each genre. Transformed features to remove skewness and reduced dimensions to **13** using Principal Component Analysis due to correlated features.
- Tuned the hyperparameters, validated the performance of multinomial classifiers and tested the trained models. Random Forest Classifier outperformed LDA and KNN Classifier, having an AUC of **0.8178**.

SKILLS SUMMARY

Programming	Python, R, Shell scripting, SQL, Java, C, C++, Arduino, MATLAB, HTML.
Frameworks & Libraries	Scikit-Learn, NumPy, Pandas, TensorFlow, PyTorch, Transformers, NLTK, OpenCV, Flask, Selenium, FastAPI, LangChain, Matplotlib, Seaborn, Tidyverse, Tidymodels, Plotly.
Cloud	Render, Heroku, AWS (learning; planning deployment for News Aggregator).
Tools	Git, GitHub, Hugging Face, OpenAI API, MySQL, Tableau, MS Excel, Microsoft Office, SPSS, Telegram API, Jupyter Notebook, VS Code, R Markdown, LaTeX.

ACTIVITIES & ACHIEVEMENTS

- External Relations Manager at SQUAD, secured **\$15000+** in sponsorship from trading and data firms, and organised Adelaide's first datathon.
- Student Advisor for university merger and volunteer at the Australian Data Science Network 2023 Conference, university open day, and orientation week.
- Soccer, hiking, and skiing enthusiast; winner of several skiing tournaments held in Gulmarg, India.
- Golden Key International Honour Society: Academic merit award presented to the top 15% of students.
- Volunteered with the National Service Scheme in India, imparting mathematical skills to children from underprivileged backgrounds.
- Served as Management Head of IEEE Robotics & Automation Society at VIT, organising 2 hackathons and multiple engagement events.

CERTIFICATIONS

AI For Everyone, Python for Everybody Specialisation, Data Visualization with Tableau Specialisation, Mathematics for Machine Learning Specialisation, Introduction to Data Science in Python, Neural Networks and Deep Learning.