Nevidu Jayatilleke

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Profile

I am passionate about advancing my expertise in artificial intelligence and data science, always eager to learn new skills and confidently apply them toward achieving success. With a BSc (Hons) in Artificial Intelligence and Data Science from Robert Gordon University, UK, my areas of focus include big data analytics, artificial intelligence, deep learning, natural language processing (NLP), explainable AI (XAI) and evolutionary computing. I am dedicated to staying abreast of new and emerging trends in the IT sector to continually enhance my knowledge and capabilities.

Education

University of Moratuwa, Sri Lanka, MSc (Major Research Component) – Part Time   Apr 2025 – Present
- Research Area: Diachronic Semantic Drift.
- Supervised by Dr. Nisansa De Silva, Department of Computer Science and Engineering.

Robert Gordan University, UK, BSc(Hons) Artificial Intelligence and Data Science   Sep 2020 – 2024 May
- First-class honours degree.
- **Key Modules:** Machine Learning, Simulation and Modelling Techniques, Computational Intelligence, Natural Language Processing, Advanced Mathematics for Data Science, Research Trends.
- Research Project in the field of text summarization.

Royal Institute International School, Sri Lanka   Sep 2014 – 2020 Jun
- CIE A Levels: 4As
- **A Level Subjects:** Mathematics, Further Mathematics, Physics, Computer Science

Experience

Research Assistant (Assistant Lecturer Grade), Informatics Institute of Technology   Nov 2024 – Present
- Research on LLMs and SLMs for low-resource languages considering cultural nuances in collaboration with the University of Erlangen-Nuremberg.
- Mentoring final-year students at IIT and UCSC as an advisor in research problems related to NLP and BioInformatics.
- Conduct lectures for students on Machine Learning, Deep Learning, NLP, and Research Trends.

Research Consultant, International Water Management Institute (IWMI)   Jun 2025 – Aug 2025
- Google funded project on developing an AI Co-Scientist for Food, Land, Water (FLW) Research.

Data Scientist, LeverEdge Sports – Sydney, Australia   June 2024 – Jan 2025
- Developing a time series regression models using ensemble machine learning algorithms and deep learning architectures to predict a baseball team's (MLB) scores at different inning intervals during a game.
- Implementing Time Series Classification models to classify game-winner at different intervals of the selected sport game using FFNN and 1D-CNN architectures.
- Analyzing NBA games to predict the winner at each quarter of ongoing games using statistical analysis methods.

Machine Learning Engineer Intern, IronOne Technologies   Jul 2022 – Jul 2023
- Contributed to a financial fraud detection project using machine learning and deep learning architectures.
- Collaborated with domain experts on data imputation, augmentation, dimensionality reduction, encoding, and scaling.
- Leveraged Amazon Snowflake and SageMaker for data extraction, analysis, preprocessing, and modeling.
- Automated data preprocessing and notebooks to streamline pipelines and support MLOps.
- Ensured data quality using statistical assertions and the Pandera library.

Publications

Advancements in Natural Language Processing for Text Summarization   Sep 2024

Nevidu Jayatilleke, Ruvan Weerasinghe, Nipuna Senanayake

4th International Conference on Computer Systems 2024 in Hangzhou, China,

10.1109/ICCS62594.2024.10795848

A Hybrid Architecture with Efficient Fine Tuning for Abstractive Patent Document Summarization   Apr 2025

Nevidu Jayatilleke, Ruvan Weerasinghe

8th International Conference on Smart Computing and Systems Engineering, University of Kelaniya, Sri Lanka

10.1109/SCSE65633.2025.11030964

Zero-shot OCR Accuracy of Low-Resourced Languages: A Comparative Analysis on Sinhala and Tamil   Accepted

Nevidu Jayatilleke, Nisansa De Silva

2025 International Conference Recent Advances in Natural Language Processing

arxiv.org/abs/2507.18264

SiDiaC: Sinhala Diachronic Corpus   Accepted

Nevidu Jayatilleke, Nisansa De Silva

39th Pacific Asia Conference on Language, Information and Computation (PACLIC 39)

arxiv.org/abs/2507.18264

Projects

PatentProSum

- Automatic text summarization (ATS) of patent documents through fine-tuning pre-trained transformers using low-rank adaptation (LoRA) and leveraging statistical graph AI techniques.
- There were two IEEE Xplore publications conducted under this research project.

Sinhala Chatbot Specialized in Sri Lankan Constitution

- A Naive RAG architecture for the Sinhala Constitution of Sri Lanka with specialized efforts in contextualized and non-contextualized embedding techniques for Sinhala language.

ThriveSync

- Optimising workforce well-being by combining Genetic Algorithms with Machine Learning (Evolutionary Computing).

Technologies

Languages: Python, Java, R, SQL

Technologies: Tensorflow, Keras, Pytorch, Pandas, Langchain, Huggingface, Pandera, Prefect, Apache Airflow, Google Cloud Platform, AWS Sagemaker, Snowflake, GitHub, Docker

Achievements and Certificates

- Convolutional Neural Networks in Tensorflow, Coursera.
- Preprocessing for Machine Learning in Python, datacamp.
- IELTS with overall score 7.5, speaking 7.5, writing 6.5, reading 8.5, listening 8.0.

Reference

Dr. Ruvan Weerasinghe

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Dr. Nisansa de Silva

Senior Lecturer at University of Moratuwa
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