Dilantha Haputhanthri

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Summary

- PhD in AI with more than five years of experience in Data Science, Machine Learning and Generative AI in Telecommunication, Energy, Transportation and Healthcare sectors.
- Developed and deployed enterprise AI solutions at Telstra using Gen AI and Predictive AI technologies for business cases in customer experience, propensity modelling and service optimisation.
- Developed and deployed AI models for renewables and battery prediction, forecasting as part of LEAP, the award-winning flagship AI platform of La Trobe University's net-zero initiative.
- Deep technical capabilities in building Data, ML and Gen AI pipelines on Azure, AWS, Databricks platforms.
- Co-authored 17 AI and Data Science Research papers/articles with 500+ citations on Google Scholar.

Skills

Programming Languages	Python, Java, C++, SQL
Generative AI & LLM Ops	Azure ML, AWS Bedrock, DeepEval, LangChain
ML / DL Frameworks	PyTorch, TensorFlow, Keras, Scikit-Learn, MLflow, AutoML, Hugging Face
Cloud & Data Platforms	Azure, AWS, Databricks
Data Engineering & Web	Delta Lake, PySpark, Power BI, Matplotlib, Seaborn, Tableau, Flask, Streamlit
Databases	PostgreSQL, MySQL, SQLite, Microsoft SQL Server
Developer Tools	Azure Devops, Git, GitHub Copilot, GitHub Actions, GitLab, LaTeX

Work Experience

Data Scientist Nov 2025 - Present
PS Hummingbird *Melbourne, Australia*

Current Data Scientist role focused on applied AI and production-grade data science delivery.

Doctoral Researcher May 2022 - Nov 2025
La Trobe University *Melbourne, Australia*

Conducted doctoral research in energy-efficient Artificial Intelligence, focusing on Sparse Distributed Representations, Vector Symbolic Architectures, and Sparse Deep Learning.

Data Science Specialist Nov 2024 – May 2025
Telstra *Melbourne, Australia*

Developed and deployed enterprise AI solutions across 5+ Telstra products for customer experience, propensity modelling and service optimisation. Telstra is Australia's largest telecom provider with 7.8 million digitally engaged customers and annual revenue of 23 billion dollars.

- Led the development of a RAG-based Gen AI solution that maps caller (IVR) utterances to self-serve instructions achieving fast resolution and potentially reducing live-agent calls by up to 30%, delivering significant cost savings.
- Developed an LLM evaluation framework using DeepEval for customer experience which further led to the public launch of telstra.com's "AI Overview" search feature.
  - Designed custom metrics to achieve Telstra-specific risk/compliance KPIs.
  - Packaged and reused company-wide, accelerating cross-organization GenAI evaluation.
  - Technologies used: GPT-4o, Gemini Flash, DeepEval, Azure ML, Power BI.
- Converted raw customer queries into a FAQ-answer dataset that now powers several new Gen AI capabilities.
  - Extracted FAQs from raw queries using embedding-based clustering.
  - Generated and curated answers via an AWS Bedrock Knowledge Base over telstra.com content.
  - Technologies used: Claude Haiku, vector embeddings, RAG, AWS (Lambda, Bedrock).
- Built and deployed a natural-language-to-SQL layer for Ask Izzy (Social Impact Partnership), improving search relevance and access to 400k+ support services.

- Designed the PostgreSQL schema and provisioned Amazon RDS.
- Integrated Vanna.AI; iteratively fine-tuned to reach target query accuracy. Exposed as a lightweight Flask REST API on AWS EC2 for rapid product integration.
- Technologies used: Claude Haiku, Vanna.AI, Azure ML, AWS (RDS, Bedrock, EC2), REST APIs (Flask), Streamlit, PostgreSQL.

Data Scientist Jan 2020 - Nov 2024
Centre for Data Analytics and Cognition *Melbourne, Australia*

La Trobe Energy AI Platform (LEAP) – the flagship AI initiative of the client's Net Zero program – delivers intelligent, real-time monitoring of energy consumption and solar generation to drive optimized energy management.

Delivered over $500,000 in cost savings and earned national recognition with the TEFMA Clever Campus Innovation Award.

- Collaborate closely with the client to craft analytics strategies and define clear, impactful deliverables in solar generation analytics.
- Led Solar Generation Analytics (within LEAP) including generation forecasting and performance monitoring for 7500+ panels across multiple campuses.
  - Built end-to-end ML pipelines: raw telemetry → feature engineering → ML models → scheduled inference & retraining.
  - Technologies used: Azure ML, Azure, Databricks, Spark, SQL Server, Python (Pandas, NumPy, scikit-learn, XGBoost), MLflow, AutoML, Node.js, React.
- Discovery of two underperforming solar sites (60% below expected output), with more than $100,000 loss and initiating immediate maintenance actions.

Education

PhD in Artificial Intelligence, La Trobe University, Australia. 2022 - 2025

- Thesis: Sparsity for Energy-Efficient AI with applications in sustainability and industry innovations
- Developed energy-efficient AI algorithms inspired by the the principles of sparsity; integrated them into the La Trobe Energy AI Platform
- Implemented and evaluated on spiking neural networks and Intel's Loihi neuromorphic hardware.
- Developed and applied AI models and algorithms in energy and telecommunication industry settings

MSc (by Research) in Computer Science and Engineering, University of Moratuwa, Sri Lanka. 2020 - 2021

- Built a multi-modal transport data integration & analytics platform with Sri Lanka's Road Development Authority.
- Delivered end-to-end: architecture → implementation → testing → containerisation; Docker microservices on Kubernetes; CI/CD; production operations.

BSc (Hons) in Computer Science and Engineering, University of Moratuwa, Sri Lanka. 2015 - 2019

- Developed a multi-modal Autism Spectrum Disorder screening prototype using EEG + facial thermography for earlier, more objective assessments.
- Collaborated with neuroscientists and psychologists at Indiana University, University of New Orleans, and Old Dominion University.

Awards

- La Trobe University Full-Fee Research Scholarship (LTUFFRS) and Centre for Data Analytics and Cognition (CDAC) Scholarship for Doctor of Philosophy.
- Dean's List Honors during the BSc (Hons) in Computer Science and Engineering, University of Moratuwa, Sri Lanka for maintaining a GPA above 3.8/4.2.
- TEFMA Clever Campus Innovation Award for the La Trobe Energy Analytics Platform (LEAP).

References available upon request