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Herman Wandabwa
Senior AI Scientist

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Results-driven Senior AI Scientist with 7+ years of experience designing innovative AI solutions in highly regulated financial environments, specializing in Responsible AI governance, GenAI development, and predictive modeling. I excel at transforming complex business challenges into scalable technical implementations while ensuring strict compliance with regulatory requirements. My technical expertise spans Python, SQL, AWS, and large-scale data infrastructure, complemented by strong leadership skills in cross-functional collaboration and driving measurable business impact through data-driven decision-making.

Skills

Generative AI:	Large Language Models (LLMs) Finetuning, RAGs and Agents development (https://bit.ly/462ck94)
Programming and Data:	Python, SQL, Spark, Snowflake and AWS
ML & Analytics:	Predictive Modeling, Experiment Design, Hypothesis Testing, A/B Testing
Project Management:	Cross-functional Collaboration, Technical Leadership, Stakeholder Engagement, Mentoring
AI Compliance:	Responsible AI practices, Model Monitoring & Metrics

Technical Experience

Senior AI Scientist   **January 2024 – Present**
Commonwealth Bank   *Melbourne, Australia*

- **Responsible AI & Compliance**: Designed and implemented a robust suite of LLM monitoring metrics for LLM-based applications to ensure Responsible AI compliance. This enabled proactive risk identification and data-driven enforcement for compliance and non-compliance feature reporting.
- **Conducted research and developed an integration endpoint** of large language models (LLMs) for multimodal data processing, enhancing system efficiency and scalability. Has so far enabled processing of approximately 6000 internal documents.
- **Developed advanced data models, including a Home Loan Refinance Uplift Model** and a **Council Leads Expansion system**, using predictive modeling and NLP techniques to unlock $500M in potential revenue.
- **Spearheaded the Rental Leads Expansion** initiative, leveraging NLP and data transformation, leading to a 9% increase in investor-related leads.
- **Collaborated with engineering and product teams** to refine data pipelines and create data-driven features that align with business goals on the **transaction embeddings** project.
- **Mentored** junior data scientists, fostering a culture of continuous learning and innovation.

Data Scientist   **July 2022 – December 2023**
Commonwealth Bank   *Sydney, Australia*

- Built a **graph-based recommendation system** for personalized customer product offerings, improving customer experience.
- **Led churn modeling and uplift analysis** for customer retention strategies, reducing churn rates by 12%.
- **Designed and implemented Fraud/Scam Rules Optimization**, saving $10M annually by applying multi-objective optimization techniques.
- **Pioneered the use of Generative AI** to automate customer service processes, enhancing operational efficiency.

Senior Analytics Specialist   **November 2021 - June 2022**
Tower Insurance   *Auckland, New Zealand*

- **Enhanced customer retention by 15%** through predictive modeling improvements to customer journeys.
- **Developed an NLP-based support chatbot** streamlining internal support communications and improve operational efficiency.
- **Transformed data insights into strategic recommendations**, collaborating with marketing teams to implement initiatives that reduced customer churn.

Data Science Solutions Specialist   **November 2020 - November 2021**
KiwiRail   *Auckland, New Zealand*

- **Developed the Ontime Performance predictive model** in partnership with operations teams to streamline scheduling processes and improve service efficiency.
- **Developed a linear programming tool** for container allocation, increasing efficiency by 60%.
- **Developed a customer forecasting model** for weekly booking predictions, helping customer service planning.

Education

PhD in Computer and Information Sciences, *Auckland University of Technology, New Zealand*   March 2017 — March 2021