

Ted Zhao

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Summary

- 3+ years of experience in ETL workflows and data orchestration.
- Proficient with Azure, AWS, and Databricks for end-to-end data solutions.
- Transitioned data operations to modern platforms like Dagster and DBT.
- Led projects at Rainmakr.ai and Skyscanner, enhancing processing times and analytics.

Skills

Data Engineering: DBT, Databricks, Snowflake, Dagster

ETL: SQL, SQLAlchemy, Spark, Pandas

AI/Machine Learning: Reinforcement Learning, Deep Learning, Clustering, LightGBM, XGBoost, SVM, Word2Vec, A/B Testing

MLOps/Cloud: Azure ML, AWS, SageMaker, MLflow

Programming Languages: Python, VBA, Scala, Julia

Web Development: Django, Flask, Asyncio, Scrappy

Version Control & Containers: Git, Docker

Experience

Data/AI Engineer, Rainmakr.ai – Adelaide, SA (Remote) May 2023 – July 2024

- Simplified data models with DBT, reducing schema size by 50%.
- Reduced redundant data storage by 15% through deduplication.
- Optimized queries, cutting runtime by 50% via re-indexing and join refinements.
- Implemented SCD principles and incremental updates, saving 10% in ingestion time.
- Integrated DBT with Dagster Cloud, unifying data streams and improving presentation.

Machine Learning Engineer, Skyscanner – Shenzhen, China Nov 2019 – July 2021

- Developed T+1 batch data processes using AWS Lambda and PySpark.
- Engineered real-time data streaming from Elasticsearch, improving CTR by 2%.
- Stored data in Parquet format within Databricks for model training and inference.
- Integrated Redis for rapid data access, enhancing real-time data feeds.

Data Scientist, DJI – Shenzhen, China Apr 2018 – Aug 2018

- Conducted competitive analysis using custom Python web crawlers.
- Developed ranking algorithms for city distribution in marketing strategy.
- Performed customer segmentation analysis for strategic planning.
- Built Django APIs for SQL querying and data model management.

Data Scientist, Smart Decision Technology Ltd – Shenzhen, China Aug 2015 – Mar 2018

- Designed Python-based credit scorecard workflows, replacing SAS.
- Built a simulation system for S.F. Express, securing a 2-year contract.
- Applied K-Means clustering for member segmentation at HKJC.
- Developed NLP-based sentiment analysis for Chinese app reviews.

Projects

ATO Chatbot	2023
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- **Demo:** <https://ato-chat.streamlit.app/> **Github:** https://github.com/tade0726/ato_chatbot
- Engineered an AI-driven chatbot for the Australian Taxation Office (ATO) to facilitate information retrieval, utilizing Retrieval-Augmented Generation (RAG) with LlamaIndex and Qdrant.
- Deployed the solution via Streamlit, ensuring a seamless and user-friendly interface.
- Enhanced data ingestion and model fine-tuning processes with ZenML, employing OpenAI's language model for precise, context-aware responses and intelligent query rephrasing.

Quantitative Trading with Reinforcement Learning – University of Adelaide	Sept 2022
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- Developed a crypto trading strategy using Reinforcement Learning.
- Designed a Sharpe Ratio-based reward system for asset trading actions.
- Created Deep Learning modules to capture price signals and market sentiment.
- Conducted back-testing with metrics like Sharpe Ratio and Maximum Drawdown.

Education

University of Adelaide, Master in Machine Learning – Adelaide, SA	June 2021 – May 2023
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Shenzhen University, Bachelor in Mathematical Sciences – Shenzhen, China	Sept 2010 – July 2014
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Certifications

Coursera, Machine Learning - https://www.coursera.org/account/accomplishments/verify/Q89DMB9RYTBT	Oct 2016
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Udacity, Machine Learning Nanodegree - https://graduation.udacity.com/confirm/PKAQPLU2	Dec 2018
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Languages

English: IELTS 7.0 Mandarin: Native Cantonese: Native
