

Timothy Chen Xian Yii

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WORK EXPERIENCE

Shopee Mobile Sdn Bhd

Chatbot Business Analyst

Nov 2025 - Present

Kuala Lumpur, Malaysia

- Analyzed chatbot conversation logs and performance metrics to identify gaps and optimize flow, improving customer satisfaction score by ~5-6%.
- Automated spreadsheet dashboards using Google Apps Script, eliminating recurring manual fixes and saving ~5 hours of manual work per week.
- Conducted data quality checks and exploratory analysis to identify user flow drop-offs and anomalies, supporting feature and operational decisions.

X-Fab Sarawak Sdn Bhd

Data Analytics Developer

Aug 2024 – Oct 2025

Kuching, Sarawak Malaysia

- Developed AI/ML models for cycle time bottleneck prediction in semiconductor manufacturing, enabling throughput improvements across multiple process areas.
- Automated manufacturing performance analysis and reporting using Python and RShiny, reducing manual effort by ~65% and accelerating expansion efforts by ~20-30%.
- Built and maintained robust SQL/Python ETL pipelines processing millions of wafer and tool records, enabling faster cycle time analysis and yield optimization.
- Prototyped a scalable global wafer map storage solution on Snowflake, handling 10M+ records and reducing storage costs by ~66% through data partitioning.
- Optimized schema design and applied data pruning in Snowflake platform, achieving ~1.25x faster query performance worldwide compared to on-prem database solutions.
- Collaborated with cross-functional teams to understand manufacturing workflows and translate operational requirements into actionable ML models and dashboards.

Pandai Education Sdn Bhd

Jan 2022 – Mar 2022

Kuala Lumpur, Malaysia

Data Analyst Intern

- Built real-time dashboards with SQL and Redash/Amplitude Analytics to track user behavior and operational metrics, boosting off-peak engagement and driving ~3.2% growth in subscribing customers.
- Collaborated with cross-functional teams to analyse user behaviour, deliver actionable insights, and support data-driven decision-making across departments.

TECHNICAL SKILLS

Programming & Tools

- Python, R, SQL, PostgreSQL, MongoDB, SnowSQL, SnowPark, RShiny, MSSQL, Docker, Snowflake, Git, Jenkins, TensorFlow, PyTorch, Streamlit, Google Apps Script, HTML/CSS, Java

Core Skills

- Machine Learning/Deep Learning, Text Analytics, Dashboarding, Data Visualization, ETL Design, Workflow automation, Cloud Data Warehousing, LLMs modelling, CI/CD pipeline, App deployment, Docker container management

EDUCATION

Master in Data Science

March 2023 - Jul 2024

Kuala Lumpur, Malaysia

University of Malaya (UM)

- Pass with Distinction, CGPA: 3.98

Research project: Detecting Early Signs of Depression in Social Media Using Transformer Techniques

- Fine-tuned and refined a MentalRoBERTa Transformer model for depression signal detection in social media text, achieving ~5-10% improvement in F1/AUC over baseline BERT models, resulting in a lighter and more robust model capable of detecting depression signals more accurately.

Bachelor of Science (Honours) in Industrial Statistics

August 2019 - July 2022

Subang Jaya, Selangor, Malaysia

Sunway University

- Graduated with CGPA 3.52 (First Class Honors)

Research project: Heart Disease Prediction Using Machine Learning Approach

- Evaluated multiple machine learning models for heart disease prediction, selecting Logistic Regression for its balance of accuracy, interpretability, and clinical safety, supporting safer and more informed patient care decisions.

ACHIEVEMENTS

Certifications

- Prompt Engineering: Elevating Conversational AI Interactions
- Snowflake Data Engineer Training
- Snowflake Hands-On Data Engineering Workshop
- SAS Undergraduate Joint Certificate

Extra Curricular Activities

- Self Initiated Side Projects
 - Applied Machine Learning & NLP Projects (Kaggle)
 - Diabetes Prediction** - Developed a CatBoost ensemble model with 72.5% accuracy, placing in the top 20% of Kaggle participants, highlighting effective model tuning and evaluation.
 - Depression Severity Scale Predictor** - Fine-tuned and developed a lightweight DeBERTa model and deployed them on Hugging Face, reducing prediction latency by ~20%.
- Event Coordinator, Sunway Statistical Professionals Club — Sunway University