

# Timothy Chen Xian Yui

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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 ~1.25× 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

Data Analyst Intern

**Jan 2022 – Mar 2022**

*Kuala Lumpur, Malaysia*

- 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

*University of Malaya (UM)*

**March 2023 - Jul 2024**

*Kuala Lumpur, Malaysia*

- 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

*Sunway University*

**August 2019 - July 2022**

*Subang Jaya, Selangor, Malaysia*

- 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