

Tobias Ivandito

Tobias.ivandito@gmail.com

(+61)426699819 | (+62)81387805907

<https://www.linkedin.com/in/silalahitobias/>

<https://www.github.com/tobiassilalahi/>

Summary

Data Scientist with a Master's in IT (**AI specialisation**) and **over 1 year of experience** proficient in **Python, Java, SQL**, and **ML frameworks**. Specialised in creating **demand forecast**, **pricing models** and developing **dashboards** for commercial applications. Skilled in **data visualisation** and delivering **actionable insights** to drive business decisions.

Technical Skills

- **Programming & Databases:** Python, Java, SQL, Big Query, PostgreSQL, MongoDB
- **Machine Learning Frameworks:** PyTorch, Scikit-learn, Pandas, TensorFlow
- **Data Engineering:** Airflow, PySpark, Kubernetes
- **Version Control & Infrastructures:** Git, Google Cloud Platform (GCP), AWS, Kubernetes, Docker
- **Visualisations:** Tableau, Google Data Studio (GDS), Plotly

Education

The University of Melbourne

Feb 2023 – Dec 2024

Master of Information Technology, Artificial Intelligence

GPA: 5.92/7.00

University of Indonesia

Jul 2016 – Jul 2021

Bachelor of Engineering, Electrical Engineering

GPA: 3.61/4.00

Employment History

Academic Tutor (Machine Learning)

Jul 2024 – Present

The University of Melbourne, Melbourne, Australia

- **Delivered weekly workshops** to **40 postgraduate students** in the Introduction to Machine Learning subject, covering data preprocessing, supervised learning, and unsupervised learning
- **Provided hands-on guidance** in applying Python-based machine learning libraries such as **Scikit-learn**, **Pandas**, and **NumPy** for real-world datasets, ensuring students gained practical data analysis skills
- **Taught foundational mathematical principles** for machine learning, including statistics, **optimisation techniques**, and algorithmic implementation to prepare students for advanced AI coursework
- **Technologies:** Python, PyTorch, Pandas, NumPy, TensorFlow, Hugging Face

Junior Software Engineer Data

Dec 2023 – Present

The University of Melbourne, Melbourne, Australia

- **Analysed and developed real-time dashboards** to monitor **~30,000 monthly customer service calls**, reducing average call waiting time by **~30%**
- **Implemented ETL pipelines** for University-wide customer service data extraction on Cisco API, decreasing latency from **5 seconds to 0.4 seconds**
- **Created microservices** to establish an audit trail for tracking **~10,000 user activities** in the student portal,

enhancing data monitoring and integrity

- **Implemented GitHub** version control for **ETL pipeline**, and led knowledge-sharing sessions for **6 engineers**.
- **Technologies:** Python, PostgreSQL, Tableau, Git, Kubernetes, GraphQL, Django, GitHub Actions

Junior Data Scientist

Jul 2022 – Feb 2023

Gravel Technologies, Jakarta, Indonesia

- **Deployed** predictive **pricing models** using **regression** and **geofencing based on demand**, increasing B2C **revenue by ~37.5%**
- Built a **360 dashboard** including campaign funnel, customer lifetime value, customer segmentation, lowering monthly **commercial campaign spending by ~15%**
- Engineered a **customer segmentation model** for Gravel's tradesmen through RFM and clustering, **saving \$20,000 in a month**
- Provided **actionable recommendations** for the product roadmap to the CPO and Finance Team, leading to a new **B2B product** that generated **AUD \$70,000** in revenue
- Collaborated with a Senior Backend Engineer to integrate job offer and pricing models, **adapting to seasonal trends**
- **Technologies:** Python, SQL, Scikit-learn, Airflow, GCP, Kubernetes, Kotlin, Google Data Studio, PostgreSQL

Data Scientist Intern

Jul 2020 – Dec 2020

Ministry of Health, Jakarta, Indonesia

- **Conducted A/B testing** to evaluate intervention strategies, providing data-driven recommendations for public health policies.
- **Built a predictive model** using Random Forest Regression to forecast COVID-19 spread across municipalities, enhancing coverage by 25%.
- **Designed and automated an ETL pipeline** to process over 50,000 COVID-19 case records, streamlining data analysis and reporting.
- **Visualised epidemiological data on Tableau**, facilitating informed decision-making during the pandemic.
- **Technologies:** Python, SQL, PySpark, Pandas, Scikit-learn, Airflow, Tableau, Git, GCP

Awards and Recognitions

- Melbourne Graduate Scholarship, 2023
- GCP Professional Data Engineer, 2022
- TensorFlow Developer, 2022
- Top 3 Place, National Google Start-Up Competition (Bangkit), 2021 – Out of 3,000 teams
- Dean's Honours List, University of Indonesia, 2021 – Out of 1,200 students

Relevant Projects

Automated Fact-Checking Systems

Feb 2024 – Jun 2024

University of Melbourne, Melbourne, Australia

- **Led a team of 3 graduates** to develop an fact-checking system for misinformation mitigation in climate science
- Built on **PyTorch** framework using **TF-IDF tri-gram model** for evidence retrieval and **Bi-LSTM** model for classification
- Achieved **Top 5** out of 150 teams in University of Melbourne Misinformation Competition 2024

Desertly

Feb 2021 – May 2021

Google, Jakarta, Indonesia

- **Led a team of 4 engineers** to build an iOS food recognition app for dietary and allergen information
- Leveraged **TensorFlow Lite's optimised InceptionV3** model for on-device real-time image recognition
- Ranked in the Top 10 out of 300 teams in the Google Machine Learning Project competition

Volunteer Experiences

Coding Instructor

Nov 2023 – Dec 2024

Computing and information Systems Students Association (CISSA), Melbourne, Australia

- **Delivered tutorials and workshops** on programming at schools in Traralgon and Lakes Entrance, engaging students in hands-on software engineering projects
- **Collaborated with 6 instructor** to **produce workshop materials**, schedules, and interactive sessions, ensuring a seamless and impactful learning experience

References

Howard Ng

Lead Engineer

The University of Melbourne

T: +6138442655 | E: hng@unimelb.edu.au

Howard was my immediate supervisor at The University of Melbourne. We worked together from 2023 to 2024

Yi Zong

Junior Software Engineer

The University of Melbourne

T: +61455664449 | E: yi.zong1@unimelb.edu.au

Yi was my colleague on the Application team at The University of Melbourne. We worked together from 2023 to 2024.