

Shem Lim

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A data scientist with expertise in geospatial AI, machine learning, and data analytics. He has developed AI-driven solutions for urban planning, hydrology automation, and large-scale geospatial analysis. Skilled in Python, BigQuery, and NLP, with a focus on predictive modeling and automation.

WORK EXPERIENCE

DATA SCIENTIST

August 2023 – Present

PT Indokoei International (Nippon Koei Group) | Jakarta, Indonesia

- Led geospatial AI initiatives, including Know Your Visitor People Movement and Comparative POI Analysis using Google Looker & BigQuery.
- Spearheaded the Good City (NYC Project) using Python and Causal Modeling for Transit-Oriented Development insights.
- Built an automated hydrology platform reducing workflow time by 50%, awarded most impactful product by ID&E Japan.
- Integrated GPT-4 for multi-layered geospatial analysis, enhancing automated insight generation.
- Developed urban heat island and demand amenities analytics presented at Bappenas and ID&E events.
- Analysis for Mitsubishi projects with BSD contract with Nippon Koei.

DATA SCIENTIST

June 2020 – March 2022

Ezeelink Indonesia | Indonesia

- Designed real-time interactive dashboards for transaction monitoring and user segmentation.
- Built recommendation engines using Turicreate and conducted sentiment analysis with NLP.
- Automated data scraping pipelines with BeautifulSoup for competitor analysis.

RESEARCH & DEVELOPMENT ENGINEER

April 2019 – May 2020

ABeam Lightstream Analytics | Indonesia

- Developed machine learning models for insurance product recommendations based on Fitbit data and presented in the Japanese Abeam Meeting.
- Explored Denodo (ETL tools) and Kinetica (BI tools) for real-time analytics.
- Managed .NET projects for Permata Bank being one of the persons who managed to finished the project.

DATA SCIENTIST INTERN

February 2018 – February 2019

Samsung Research and Development Indonesia | Indonesia

- Built predictive sales forecasting models using linear regression.
- Developed customer segmentation models using H2O and Dask for handling large datasets.

EDUCATION

ASIA PACIFIC UNIVERSITY OF TECHNOLOGY AND INNOVATION

April 2022 – June 2023

Master's in Artificial Intelligence | Malaysia

GPA: 3.49/4.00

- Built Natural Language Processing (NLP) models for sentiment analysis and word error correction.
- Optimized Logistic Regression Models for weather forecasting using Genetic Algorithms.
- Built a CNN-based deep learning model with Keras for image classification.

BINA NUSANTARA UNIVERSITY (BINUS)

March 2015 – February 2019

Bachelor's in Information Technology | Indonesia

GPA: 3.66/4.00

- Deep Learning for Speech Recognition Command.

PROJECTS AND ACHIEVEMENTS

CONTRACTOR OF BSD PROJECTS Mitsubishi Motors Corporation BSD, Indonesia	December 2024 – February 2025
<ul style="list-style-type: none">Assigned as a single role for geospatial analysis to present people patterns in BSD city out of many data scientists.	
GEOSPATIAL MARKET ENTRY STRATEGIST Bluebird Group Bali, Indonesia	September 2023 – February 2024
<ul style="list-style-type: none">Analyzed hundreds of millions of OD records to identify key transportation patterns.Provided data-driven recommendations that guided the company’s expansion decisions.	
GEOSPATIAL INSIGHT PLATFORM FOR PROPERTY DEVELOPER Adhi Karya Properti BUMN Jakarta, Indonesia	February 2024– March 2024
<ul style="list-style-type: none">Built a self-service GeoSpatial AI tool to enable real-time movement and location analytics.Reduced manual analysis time up to estimated 50% and improved decision-making for stakeholders.	
AWARD-WINNING HYDROLOGY AUTOMATION PLATFORM DEVELOPER ID&E Japan Japan	March 2024–Present
<ul style="list-style-type: none">Developed an automated hydrology analysis system reducing workflow time up to estimated 50%.Recognized as the most impactful product by ID&E Japan.	
JAKARTA’S ROAD INFRASTRUCTURE RISK CLASSIFICATION STRATEGIST Nippon Koei X Grab X Department of Transportation (DoT) Jakarta, Indonesia	October 2024-February 2025
<ul style="list-style-type: none">Built a classification model using Google Traffic and ride-hailing data to assess road safety.Contributed to Jakarta Department of Transportation and ride-hailing operators optimize risk mitigation strategies to ensure safety of two-wheelers drivers in Jakarta.	
TECHNICAL LEAD FOR URBAN HEALTH PREDICTIONS WITH CAUSAL MODEL BDP London X Nippon Koei Singapore	March 2024-October 2025
<ul style="list-style-type: none">Led the development of a causal model predicting neighborhood health based on amenities, enhancing urban health predictions with improved accuracy.Findings were presented at high-level urban planning forums of ID&E Japan, BDP and Nippon Koei and Bappenas (Government), influencing policy discussions.	
SOLE DEVELOPER OF GPT-4’s FIRST GEOSPATIAL INTEGRATION INSIGHTS Nippon Koei Singapore - GauDT	March 2024-October 2025
<ul style="list-style-type: none">Developed an AI-powered platform that automates insight extraction from complex spatial data, achieving the first-ever integration of GPT-4 for geospatial instant insights.Helped property developers by reducing analytical workload by 30% and the first platform to automatically generating insight that improve the decision making up estimation of 20% faster in decision making.	

SKILLS AND TECHNICAL EXPERTISE

- Programming & Data Engineering: Python (Advanced), SQL, BigQuery, Flask, Dash, AWS
- Machine Learning & AI: Predictive Modeling, Deep Learning, NLP, Causal Inference, Regression Modeling
- Geospatial Analysis: Google Looker, BigQuery GIS, GeoSpatial Intelligence, Multi-Layered Data Analysis
- Data Visualization & Analytics: Tableau, Power BI, Looker, Dash, Matplotlib
- Soft Skills: Communication, Leadership, Technical Presentation, Project Management

LANGUAGE

- Indonesian – Native
- English – Fluent