

Joel Sng Zhen Wei

Information Systems and Business Final Year Student

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[Portfolio](#)

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EDUCATION

Singapore Management University

Aug 2021 to Present

GPA 3.76/4.00

Double Degree in Information Systems (Analytics Major) and Business Management (Operations Major)

Key Courses Taken: Machine Learning & Applications | Supply Chain Analytics | Data Management | Operations Management

Achievements:

- Magna Cum Laude
- Yu Xin Community Leadership Award
- Dean's List for all applicable years
- Student Council representative
- SMU Muay Thai member
- SMU Climb member

PROFESSIONAL EXPERIENCE

Data Analyst Intern, Housing & Development Board

Jan 2024 to Aug 2024

- Accelerated unstructured correspondence data mining from 4 mins to 30s using RPA data mining workflows and UiPath OCR.
- Streamlined text analytics in R and Python to conduct topic analysis, clustering, and categorisation of customer correspondences.
- Automated data extraction and cleaning of unstructured text data using SAS workflows.
- Applied random forest machine learning algorithms in R to facilitate investigations into suspicious customer transactions.
- Created dashboards in SAS and Tableau for monitoring of structured transaction data for flat rentals and transfers.
- Extracted data and insights from data warehouses using SAS coding and SQL to drive customer-facing e-service enhancements.
- Hands on experience with SAS, UiPath, Power BI, SQL, R, Tableau, Python for data mining, analysis and visualisation.

Technology Consulting Intern, PwC Singapore

May 2023 to Aug 2023

- Contributed to digital transformation engagement for one of Asia's largest real estate investor, developer, and manager.
- Collaborated with SAP consultants to migrate business partner data from multiple ERP systems to a new integrated solution.
- Conducted data analysis on business partner data to produce actionable insights for Digital Transformation team.
- Developed systems to track configuration objects, facilitating senior consultants' oversight.
- Created business blueprints for clients surrounding finance processes in new ERP solution.

PROJECTS

Neuron Activity Mapping using Machine Learning

May 2024 to Aug 2024

- Utilised ICA and clustering algorithms to analyse high-dimensional neural data.
- Visualised neural patterns and activity.

Backend:

Frontend:

APIs:

AI Assistant for New Customers

Aug 2024 to Present

- Capstone project in partnership with OCBC.
- Developed large language model (LLM) assistant to help new OCBC customers navigate account options and investment products.
- Using customer income and financial goal inputs, application would call OCBC account and savings options data and compute what options are the most optimum for customer needs.

Backend: Python, Flask

Frontend: NextJS, Tailwind CSS

APIs: Gemini, OCBC API

Options Pricing using Machine Learning

Aug 2024 to Present

- Developed machine learning models to predict option prices using historical market data.
- Applied algorithms including Black-Scholes, Monte Carlo simulations, and neural networks to enhance prediction accuracy.
- Created web application using Python and Flask for interactive analysis and visualisation of options pricing models.

Backend: Python, SKSlearn

Frontend: Matplotlib, Seaborn

APIs: Yahoo Finance API

LEADERSHIP AND COMMUNITY SERVICE

President, Special Interest and Community Service Sodality

Jan 2023 to Dec 2023

- Leader of a committee overseeing 22 SMU clubs.
- Represented SMU community service clubs on the student council.
- Oversaw planning of 7 campus events and camps throughout the year.
- Headed implementation of new sustainability initiatives in campus event under my purview.
- Invited to CNA Radio talk show CNA 938 to speak on youth volunteerism.

President, StarringSMU'22

Jan 2022 to Dec 2022

- Leader of largest freshman community service project in SMU.
- Project of 95 volunteers helped 250+ persons with disabilities.
- Invited to the Istana to receive an award of appreciation from President Halimah Yacob.

SKILLS

Coding Languages: Python, R, SQL, HTML, JavaScript

Software Tools: Power BI, UiPath, Tableau

Certifications: Data Analytics (IBM), Excel (IBM), Python (University of Michigan), SQL (University of Michigan)