

Teo Yong Ray

SMU Information Systems, Year 4 (Digitalisation & Cloud Solutioning, Business Analytics)

teoyongray@hotmail.com | +65 9062 0520 | Singapore Citizen | [Portfolio](#) | [Github](#) | [Linkedin](#) |

Driven business analyst with strong academic performance and hands-on experience in building user-centric solutions, comprehensive data analysis and process automation. Passionate about stakeholder engagement and effective communication to encourage solution adoption.

Education

SINGAPORE MANAGEMENT UNIVERSITY

Aug 2022 - May 2026

Bachelor of Science (Information Systems)

Double Major in **Digitalisation & Cloud Solutioning, Business Analytics**

- GPA 3.9/4.0 (Summa Cum Laude), Dean's List (all applicable years)

Technical Skills

- **Data Analysis/AI:** Tableau, PowerBI, R, Excel, OpenAI LLM API, Pandas, Scikit-learn, Matplotlib, NLTK, MySQL, PostgreSQL, DynamoDB, MongoDB, PyTorch, Tensorflow
- **Programming Languages:** Python, Java, Kotlin, Javascript
- **Web Development:** React, Node.js, Vue, TypeScript, Flask, Spring Boot
- **Dev Tools:** Git, GitHub Actions, Docker, Terraform
- **Other:** AWS, Agile/Scrum, CI/CD, Figma

Work Experience

HOUSING & DEVELOPMENT BOARD (HDB)

May 2024 - Aug 2024

Design Automation Intern (Python)

- Tasked to automate a design process in Python and AutoCAD over a 3-month period to reduce reiteration time and increase variability of designs
- Conducted user research directly with engineers to discover pain points and update requirements
- Liaised with key business stakeholders to ensure project was on track and aligned with user and business requirements
- Created comprehensive documentation for both users and developers to enhance future maintainability and usability
- Reduced process time from 5 days to 30 minutes with automation

SINGAPORE MANAGEMENT UNIVERSITY

Aug 2023 - Jan 2024

Chatbot Specialist

- Developed chatbot solution using a low code platform (PowerVA) to address students' queries across multiple departments
- Orchestrated automated data migration and integration from 15 legacy systems, implementing data cleaning and validation processes

Notable Projects (Refer to Portfolio website for full list)

CAFETOLOGUE

2025

AI-Powered Mobile Application

- **AI Integration:** Implemented OpenAI LLM API for computer vision to identify food items in image, practicing effective AI integration including cost optimisation. Also utilised few-shot prompting and prompt engineering to maximise quality of response.

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- **Lightweight Full-Stack Development:** Built complete mobile app with Firebase Authentication and Storage, Google Maps API integration, and optimized async API calls
- **Mobile-focused UI/UX Design:** Created intuitive interface following mobile design best practices aiming to reduce user effort and erroneous input

DATA ANALYSIS ON SMU STUDENTS

2025

Customer journey analysis and dashboarding

- **Conducted comprehensive customer journey analysis** for SMU SCIS students using TheyDo, mapping 5-phase student lifecycle to identify critical pain points and service gaps
- **Integrated external datasets** to validate findings and benchmark against industry trends
- **Created interactive dashboards** in Tableau to visualises key issues and trends
- **Formulated data-driven recommendations** including curriculum optimization and service delivery improvements

JOBSEARCH

2025

AI-Powered Resume-Job Matching Platform

- **Developed a skill extraction and job-resume matching system** to help hiring managers identify key technical skills in candidate resumes
- **Built comprehensive NLP pipeline** processing 124,000+ job postings and 29,000+ resumes using spaCy for tokenization, lemmatization, and POS tagging
- **Developed hybrid Named Entity Recognition system** combining rule-based, statistical (CRF), and BERT models to extract technical skills across 11 categories with 95%+ precision
- **Implemented semantic document matching** using Word2Vec embeddings and Gensim to rank job-candidate compatibility, outperforming traditional TF-IDF approaches
- **Created ground truth dataset** by leveraging multiple LLMs (ChatGPT, Claude, Deepseek) for model evaluation and validation through precision, recall, and F1-score metrics