

Ching-Yuan (Desmond) Peng

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Education

New York University

Master of Science in Data Science

Sep 2025 – Jun 2027

(expected)

National Taiwan University

Bachelor of Business Administration - Operations and Data Analysis Module

Sep 2021 – Jun 2025

- Relevant coursework: Natural Language Processing, Machine Learning, Data Analysis, Database Management

Professional Experience

Co-Founder & Data Scientist, Deepaign Inc.

Feb 2025 – Sep 2025

- Launched LangChain-powered AI pipeline that processes political petitions through automated analysis, collaborating with over 10 political teams to optimize campaign strategies.
- Conduct a statistical analysis of the petition and the engagement patterns between campaigns, identifying key sentiment drivers that improved the response rates by 17% for political teams.

Backend Engineer Intern, Taiwan Mobile Inc.

Jul 2024 – Dec 2024

- Architected an AI-powered learning platform using FastAPI and SQLAlchemy to integrate with backend APIs, frontend, and database.
- Designed an algorithm that combines RAG and web scraping to recommend suitable learning materials to users, creating a personalized automated recommendation system. The platform has accumulated over 500 times of use by internal employees to learn programming languages.

Data Analytics Intern, LnData Inc.

Apr 2024 – Jun 2024

- Executed A/B testing experiments in GA4 to optimize social media conversion funnels, achieving statistical significance with 2,800+ visitors per variant and rigorous experimental controls.
- Increased conversion rate by 35% and reduced customer acquisition cost by 26% through data-driven optimization of landing page design, CTA copy, and content strategy based on user behavior analysis.

Customer Success Intern, GoFreight Inc.

Jul 2023 – Nov 2023

- Developed dynamic web scrapers with Selenium to track shipping, air, and rail logistics in real-time, reducing operation time and boosting query efficiency by 63%.
- Simplified logistics trend analysis and internal document queries, improving and standardizing procedures.

Projects

Spotify Music Analytics Platform: Orchestrating an End-to-End Data Pipeline

Aug 2025 – Present

- Architected and orchestrated a fully automated ETL pipeline using Apache Airflow to manage daily data ingestion, quality checks, and transformation, ensuring timely delivery of data reliability.
- Designed and implemented a robust dual-database architecture (MongoDB for raw ingestion and PostgreSQL with Star Schema DWH for structured analytics) to optimize data storage and query performance.

Parking Revenue Prediction with Location Data – Collaboration with Irent Inc.

Sep 2023 – Jun 2024

- Utilized Google Places API and web scraping to collect data and LGBM for revenue prediction; achieved a MAPE of 20%.
- Applied SHAP and PDP to identify factors influencing parking revenue, such as nearby commercial buildings and competitor density, providing data-driven insights for future site selection.
- Developed BI dashboards using Power BI to visualize revenue potential for site selection.

Extracurricular Activities

Director, Aborigines Service Club at National Taiwan University

Sep 2021 – Aug 2025

- Managed a team of 40 members to organize educational camps for indigenous students in remote areas of Taiwan.
- Provided regular academic support over 4 years, mentoring over 200 students and enhancing their academic performance.

Skills and Languages

Programming: Python (Pandas, Numpy, Matplotlib, Seaborn, Scikit-learn), R, SQL, Cypher

Tools: Google Cloud Platform, Docker, Apache Airflow, PostgreSQL, MongoDB, Spark

Analytics: Statistical Analysis, A/B Testing, Predictive Modeling, Feature Engineering, Data Mining

Certificates: Google Analytics Certificate, DataCamp Data Engineer Certificate, DataCamp Data Scientist Certificate