

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
<ul style="list-style-type: none">• 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
<ul style="list-style-type: none">• 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
<ul style="list-style-type: none">• 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
<ul style="list-style-type: none">• 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
<ul style="list-style-type: none">• 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
<ul style="list-style-type: none">• 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
<ul style="list-style-type: none">• 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