Ting-Yu Nien

Personal Information

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Language and Technical Skills

- **Programming:** Python (pandas, NumPy, scikit-learn, matplotlib, stats models, machine learning models), SQL, Stata, JavaScript (Vue)
- **Version Control & Workflow:** Git, CI/CD, Power Platform (Power Apps, Power Automate)
- **Database & Cloud Technologies:** Snowflake, SQL, Azure (basic knowledge)
- **Additional Technical Skills:** Tableau, Power BI, Figma, Adobe XD
- **Language:** Chinese (Mandarin, Native), English

Work Experience

Kraft Heinz | Data Analyst   *R&D Center, The Netherlands, Jul 2024 – Mar 2025(9 months)*

Data Wrangling, Preparation & Visualization
- Extracted and structured large datasets from Snowflake using SQL, enabling downstream analysis and dashboard integration.
- Developed automated ETL pipelines using Python, Power Automate, and Tableau Prep to clean and standardize unstructured Excel datasets for use in BI tools.
- Collaborated with stakeholders to design and deploy interactive dashboards in Tableau and Power BI for customer feedback, investment analysis, and product development, transforming business questions into actionable insights.

Trends & Social Media Analysis
- Analyzed social media data from Gen Z consumers to identify emerging trends in ingredients, flavors, and cuisines across the UK and USA.
- Forecasted upcoming trends in Eastern markets, providing insights for product ideation workshops and aligning development strategies with evolving consumer preferences.

Digital Transformation & Application Development
- Contributed to a global digital transformation initiative by identifying data governance gaps and designing scalable workflows for recipe and knowledge management.
- Led the full development lifecycle, including database design, SQL-based data retrieval from Snowflake, Dataverse integration, and UI/UX and app development using Power Apps.
- Executed User Acceptance Testing (UAT) and deployed the solution to production, improving cross-functional collaboration and knowledge-sharing across R&D teams worldwide.

Education

Master of Science in Human-Technology Interaction   *Sep 2021 - Mar 2024*
Eindhoven University of Technology (TU/e), Eindhoven, The Netherlands

Relevant courses: Advanced Data Analysis, Machine Learning Engineering, Empirical Methods of Software Engineering

Bachelor of Science in Information Management   *Sep 2017 - June 2021*
National University of Kaohsiung (NUK), Kaohsiung, Taiwan

Relevant courses: Statistics, Python, SQL, Web development, JavaScript

Selected Academic Projects

House Price Forecasting | Random Forest & Feature Engineering
- Predicted housing prices using a Random Forest model with rolling-window features to capture short-term price dynamics.

- Evaluated model performance using cross-validation and MAE, achieving best results with a 2-month window.

CNN for Gesture Recognition | MobileNetV2 & Transfer Learning
- Trained a convolutional neural network on the Rock-Paper-Scissors dataset using MobileNetV2 to reduce noise and classify hand gestures accurately.
- Applied dropout, batch normalization, and global average pooling to improve generalization and training stability.

Physiological Arousal & Persuasion Modeling | Python, Time-Series Preprocessing & Mixed Models
- Investigated the impact of arousal on message persuasiveness using both sensor-based RR intervals and self-reported data.
- Preprocessed 1-minute HR samples with Python to compute RR intervals, extracted 3-, 5-, and 7-minute baseline windows, and engineered features such as arousal level and reactivity scores.
- Built and evaluated linear mixed models to analyze interaction effects (e.g., arousal $\times$ argument strength), applying likelihood ratio tests to compare model performance.

Hotel Guest Review Management Information System | JavaScript (Vue), CI/CD & Database and UX Design
- Collected and analyzed reviews from booking platforms to uncover key factors driving word-of-mouth in the hospitality industry.
- Designed and developed an interactive web application using JavaScript (Vue.js), MongoDB as database, and Adobe XD for data visualization and user interaction.
- Built a custom statistical dashboard to display real-time sentiment trends and review analytics.
- Awarded 1st Place for Graduation Project, Department of Information Management, NUK.