Jeng-Yue (Buffett) Liu

⌂ **Buffett's-Website**   ✉ **buffett@ntu.im**   in **Jeng-Yue Liu**   ○ **buffett0323**

EDUCATION

National Taiwan University (NTU)   *Sep. 2020 – Jun. 2025*
*Dual Degree: B.B.A. in **Information Management** & B.S. in Geography*

- Awards: Phi Tau Phi (**Top 1%** of the school), NTU Presidential Award, Dean's List Award (Ranked **1/49** in department)
- Overall GPA: 3.95/4.3, CS-related GPA: **4.15/4.3**
- Teaching Assistant: Machine Learning (x2), Programming Design
- Courses: Machine Learning, Artificial Intelligence, Natural Language Processing, Web Programming, Algorithms, Data Structures, Operating Systems, Discrete Mathematics, Management Mathematics, Manufacturing Data Science, etc.

TECHNICAL SKILLS

Programming/Tools	Python, C/C++, R, Java, JavaScript/TypeScript, PyTorch, TensorFlow, HuggingFace, Librosa
Research Topics	Audio/Speech Separation, Deep Generative Models, Representation Learning, LLM, NLP, CV

PUBLICATION

Trip-purpose-based methods for predicting human mobility's next location – [*pdf.*]   *Apr. 2024*
B.S. Thesis, (Advisor: Tzai-Hung Wen)

- Developed **hybrid LSTM & GRU** models with a trip-purpose approach, achieving **80% accuracy** in movement prediction.
- Selected by the National Science and Technology Council for a **government-sponsored** undergraduate research program.
- **1st author**, received **2024 Bachelor Degree Thesis Award** (**Top 3** of the department).
- Presented at the 2024 Annual Conference of the Population Association of Taiwan.

EXPERIENCE

NetBase Quid Inc. (Pioneer in AI-Driven Insights)   *Dec. 2024 – Present*
Machine Learning Engineer Intern

- Applied **NLP** algorithms to extract insights from social platforms and news data for actionable solutions.

Academia Sinica (Taiwan's Premier Research Institution)   *Jun. 2024 – Present*
Research Assistant (Mentor: Prof. Li Su & Yi-Hsuan Yang)

- Researched **Music AI DJ** in language-query music source separation, leveraging **Band-Split Mamba2** models and **Hypernetwork conditioning** to enhance instrument-specific separation, boosting Signal-to-Noise Ratio (SNR) by **7%**.
- Developed a **VAE** to disentangle pitch and timbre in the **Latent Diffusion** framework, enabling precise source isolation.
- Adapted separation models from **Computer Vision** and **Speech Separation** to music for experimental research.

CIeNET Technologies (ALTEN-Backed IT Leader)   *Dec. 2023 – Jun. 2024*
Engineering Intern

- Designed prompts for Google Cloud Code Extension in IDEs, boosting code completion and productivity.
- Automated **50+** test cases in Python using **PyAutoGUI** and **Splinter**, optimizing test execution and management.

SELECTED PROJECTS

A Graph RAG & LLM-Powered Content Analysis Assistant, NTU – [*GitHub*]   *Jan. 2024 – Present*
AI Platform Engineer & Data Scientist (Remote collaboration)

- Collaborated with a team of 6 and California State University, Bakersfield to develop a **GraphRAG**-based news analysis tool, leveraging **LLMs** for insight extraction from large datasets and reducing manual effort in social science research.
- Applied **NLP** techniques like **LDA** and **NMF** to analyze attitude shifts surrounding the 2021 Atlanta spa shootings.

Innovative Web Solutions for Agriculture, IMV Contest – [*GitHub*]   *Jul. 2024 – Nov. 2024*
Full-stack Developer

- Advanced to the contest **semifinals** by building a digital transaction platform for agricultural goods in 2 months using **TypeScript (React)**, **Node.js**, and **MongoDB**, deployed via Render and Vercel.
- Developed a **Selenium** web crawler for real-time vegetable prices to optimize fertilizer ratios for carbon reduction.

EXTRACURRICULAR ACTIVITIES & LEADERSHIP

Co-Manager & Resident DJ, Rumeng Bar, Taipei   *Jan. 2023 – Present*
President, Department of Geography Student Association   *Sep. 2021 – Aug. 2022*