Po-Yen Chen

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EDUCATION

New York University Tandon School of Engineering　　　　　　　　*Sep 2022 – May 2024*
Master of Computer Engineering　　　　　　　　　　　　　　　　　New York, USA
Current GPA*: 3.83/4.0*

National Chung Cheng University　　　　　　　　　　　　　　　*Sep 2015 – Jun 2019*
Bachelor of Computer Science and Information Engineering　　　　　Chiayi, Taiwan
Overall GPA*: 3.73/4.0*

EXPERIENCE

NYU Tandon School of Engineering　　　　　　　　　　　　　　*Jan 2024 - May 2024*
Course Assistant of Internet Architecture & Protocols　　　　　　　New York, USA
- Supported over 30 students, improving their understanding of coursework and raising average grades by 15%.
- Assisted students with technical issues during lab hours and graded exams with constructive feedback.

Medicrowd Smarthealth Co., Ltd.　　　　　　　　　　　　　　*Apr 2020 - May 2021*
Software Development Engineer　　　　　　　　　　　　　　　　Taipei, Taiwan
- Constructed a model that can determine the department where a user should seek medical attention based on their physical condition which reduced 50% of the data processing time of the customer service team.
- Developed robust APIs using FastAPI to integrate machine learning models into internal systems, enhancing operational efficiency by 40% and enabling real-time decision-making.
- Designed an intelligent customer service system that enabled automated problem resolution, resulting in a 30% reduction in response time for the customer service team and enhanced 20% customer satisfaction.

PROJECTS

QoS-Aware Traffic Engineering
- Optimized routing decisions in a distributed network system to ensure that every path in the network meets the Quality of Service (QoS) constraints, including considerations such as delay and loss rate.
- Integrated Reinforcement Learning (RL) and Linear Programming (LP) techniques, achieving a 100x speed improvement over traditional traffic engineering algorithms.

Language Model Compression
- Implemented step-by-step distillation and integrated a whitebox distillation method using reverse KL divergence, addressing issues of overestimation and large data requirements inherent in conventional methods.
- Achieved an improvement of over 20% in Rouge-L score compared to standard knowledge distillation techniques.

Box Office Predictor
- Conducted sentiment analysis on 5,000+ movie reviews from Twitter and Reddit; integrated sentiment data with cast, title, and category to accurately forecast box office performance, improving prediction accuracy by 20%.
- Used Airflow to monitor and schedule ETL pipelines to automatically scrape the data and update the model.

AI Doctor
- Adapted BERT and natural language processing technologies, which help users diagnose possible illnesses through conversation with over 90% accuracy.

SKILLS

Programming Languages : **Python, C, C++**, JavaScript, Java, Matlab, HTML, CSS, CUDA
Frameworks & Tools: : **PyTorch, TensorFlow, Gurobi**, Git, Docker, Mininet, RYU, HPC, Vue.js, Nginx, Airflow
Databases & Big Data: : MYSQL, PostgreSQL, MongoDB, Neo4j, Redis, Spark