

Ning-Yu (Michael) Kao

nkao@alumni.cmu.edu ♦ (+886)930-663-992 ♦ www.linkedin.com/in/kaoningyupage

EDUCATION

Carnegie Mellon University

Master of Science in Chemical Engineering
GPA: 3.9/4.0

Pittsburgh, PA, USA
Dec 2021

Chang Gung University

Bachelor of Science in Chemical and Materials Engineering

Taoyuan, Taiwan
Jan 2019

SKILLS

Programming Language: Python, SQL, MATLAB, JavaScript, HTML, CSS

Toolkit/Framework: Sklearn, Tensorflow, PyTorch, Apache Spark, OpenCV, Streamlit, PostgreSQL, Snowflakes, Tableau, Azure(ML Studio, Python SDK, Databricks), Git

Languages: Mandarin(Native), English(Fluent), German(Beginner)

PROFESSIONAL EXPERIENCE

Reliability Data Engineer

Siemens Energy

Taoyuan, Taiwan
11/2022-Present

- Develop predictive models to detect anomalies of sensor data, which could avoid turbine tripping and save up to \$500k EUR.
- Build various machine learning models to predict possible failure for equipment and system behavior such as pump vibration and pressure.
- Establish an executive application for report generation, connecting with Snowflake and Python.
- Facilitate digitalization by transferring maintenance paperwork to e-checklists system.

AI Engineer

Formosa Ha Tinh Steel Corp.

Taipei, Taiwan
02/2022-08/2022

- Improved the yield of sintering process with ML models, generating profit over \$1M USD/year.
- Developed data-driven models to save over \$100k USD/month of energy cost by estimating gases usage for multiple devices.
- Created a webpage with an object detection system to capture contaminated emission, a LINE message alarm sender, and PostgreSQL database for recording.

Machine Learning Engineer Intern

Ret[AI]ling Data

Taipei, Taiwan
08/2021-12/2021

- Designed a multiple object detecting and tracking system to quantify footprints for consumption field using YOLO and DeepSORT algorithm.
- Demonstrated project managing skill to prototype various projects such as face recognition, emotion detection, and driver monitor system.

RESEARCH PROJECTS

Machine Learning in Additive Manufacturing

Carnegie Mellon University – Mechanical AI Lab.

Pittsburgh, PA
01/2021-12/2021

- Designed machine learning models to forecast product geometry, defect types, and mechanical properties in metal additive manufacturing.
[**@MeltpoolNet: Melt pool characteristic prediction in Metal Additive Manufacturing using machine learning, Additive Manufacturing, 2022**]
- Utilized CNN-based models to predict and visualize melt depth in laser powder bed fusion process.

LEADERSHIP

President, Student Association, Dept. of CME - Chang Gung University

2016-2017