

Chanoknun Worathongchai

Data Scientist

Recent chemical engineering master's graduate with experience in applying coding and deep learning to advanced chemical process simulation and control.

ACADEMIC RESEARCH

Long Short-Term Memory Network based Model Predictive Control for Reverse Osmosis Process

Published primary results in The Pure and Applied Chemistry International Conference 2020 proceeding.

- Developed the structure of LSTM model as an internal model of model predictive control for demonstrating the average permeate concentration control by manipulating feed pressure for wastewater treatment via reverse osmosis process.
- The proposed controller which was tested in several simulation cases can bring the controlled variable to the trajectory without oscillation and overshoot. LSTM based MPC has more robustness and gives better control performance in comparing to traditional controller.

PERSONAL PROJECTS

Movie Recommendation System

- Fetched the data from TMDB API, then extracted features by multiple techniques such as Doc2vec and Bag-of-words for arbitrary text and One-hot encoding for categorical features.
- Built a movie recommendation system using Content-Based filtering by finding cosine similarity and deployed the app to Streamlit could.

Stock Price Forecasting

- Developed the models to predict future stock prices based on previously observed values.

India Railways Performance Analytics Dashboard

- Created a Power BI dashboard to analyze overall performance of Top 5 train types and 4 big railway stations in India.

COVID-19 Global Vaccine Tracker Dashboard

- Built a Power BI dashboard to track how the vaccination program is performing worldwide.

CONTACT

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SKILLS

Techniques:

- Time Series Forecasting
- Recommendation System
- Machine Learning
- Deep Learning

Tools and Frameworks:

- Python (NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn, SciPy, TensorFlow, Streamlit)
- Git
- SQL (SQLite, PostgreSQL, MySQL)
- Power BI

EDUCATION

Master of Engineering (Chemical Engineering)

2019 – 2022

Chulalongkorn University

- Control and Systems Engineering Research Laboratory

Bachelor of Engineering (Chemical Engineering)

2014 – 2018

Silpakorn University

CERTIFICATION & TRAINING

Machine Learning Specialization

From Coursera

TensorFlow Developer Certificate in 2020: Zero to Mastery

From Zero To Mastery Academy

Neural Networks and Deep Learning

From Coursera

SQL (Basic – Intermediate – Advanced) Certificate

From HackerRank