

# Pathompong Muangthong

## Data Scientist

Bangkok, Thailand

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## Profile

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Recent Computer Science graduate with a strong foundation in programming languages, data analysis, and machine learning. Skilled in data scraping, preprocessing, and visualization using tools such as Pandas, Matplotlib, and others. Experienced in building recommendation systems using TensorFlow and PyTorch. Passionate about utilizing data-driven decision-making to make a meaningful impact in a data science role. Seeking to leverage my skills and knowledge to contribute to a company's data-driven initiatives.

## CORE COMPETENCIES AND TECHNOLOGIES

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<b>Programming Languages</b>	Python, SQL, Java
<b>Frameworks/Tools</b>	Machine Learning – PyTorch, PyTorch Geometric, TensorFlow Data Visualization – Pandas, Matplotlib, Plotly, Seaborn Web Scraping – BeautifulSoup
<b>Skills</b>	Research, Recommender Systems, Graph-based neural network

## EDUCATION

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**Bachelor Degree at Chulalongkorn University – Bangkok**

*June 2018 – August 2022*

Graduated with a Bachelor of Science degree in Computer Science.

## COURSES

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Database Systems, Mathematical Perspectives on Machine Learning Algorithms, Hands-on Machine Learning, Artificial Intelligence and Expert Systems, Probability And Statistic, Linear Algebra

## ACCOMPLISHMENTS

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**Senior Project: Social Recommendation Based on Weighted Graph**

*December 2020 – May 2022*

Developed a weight calculation method for a meaningful perspective in graph-based recommendation model and demonstrated its effectiveness in comparison to baseline model.

### **Key achievements**

- Improved my research skills.
- Demonstrated the effectiveness of the developed method in comparison to the baseline model improved training time cost, despite similar evaluation score.
- Improved the understanding of graph-based recommendation models and its various perspectives.
- The developed method could be applied to various recommendation tasks.

Built a multi-objective link prediction recommender system using PyTorch Geometric on a large-scale heterogeneous graph e-commerce data for a Kaggle competition.

**Key achievements**

- Developed a multi-objective link prediction recommender system using PyTorch Geometric on a large-scale heterogeneous graph data
- Improved the understanding of graph data and its processing with PyTorch geometric library
- Achieved a competitive performance on the submission with a Recall@20 score of 0.486 for my custom model and 0.511 for the Node2Vec model.

Collected and preprocessed book data from local bookstore and various websites using Python libraries such as BeautifulSoup and Pandas. Shared the dataset on Kaggle.

**Key achievements**

- Cleaned, processed, and transformed the data to make it suitable for analysis and modeling.
- Shared the dataset on Kaggle to make it available for other researchers and data enthusiasts.
- Improved the understanding of web scraping, data cleaning, and preprocessing techniques.

Created interactive and informative data visualizations using Kaggle datasets and Python libraries including Pandas, Matplotlib, Seaborn and Plotly.

**Key achievements**

- Explored, analyzed and visualized various aspects of the data using different visualization techniques and sentiment analysis.
- The visualizations were useful for understanding the data and its underlying patterns, trends, and relationships.
- The visualizations could be used to communicate insights and findings to a wider audience.

**EXTRA-CURRICULAR ACTIVITIES**

Finalist in Environmental Engineering category at Intel ISEF 2017 for team science project in high school.

**Key achievements**

- Demonstrated exceptional research skills and scientific knowledge.
- Demonstrated effective teamwork abilities to successfully complete a complex project.
- Highlighted passion for science and technology through participation in ISEF.
- Achieved recognition at the international level for the project and the research skills.
- Showcased ability to work in a team.