

# Pupipat Singkhorn

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## EDUCATION

### Chulalongkorn University

2022 - Present

Bachelor of Engineering - Computer Engineering Major.

Relevant Coursework: Pattern Recognition, Algorithm Design, Data Structures, Database Systems

### Triam Udom Suksa School

2019 - 2022

*Science-Mathematics Major. GPA: 3.85*

- *Thailand Physics Olympiad (TPhO)* - 19th TPhO: Bronze Medal, 18th TPhO: Participated
- *Triam Udom Photo Club (Staff and Member)* - Captured photos at various school events.

## WORK EXPERIENCE

### Data Scientist Intern - Kiatnakin Phatra Bank

June 2024 - July 2024

- *Used Car Price Forecasting*
  - Developed ensemble machine learning models for forecasting used car prices to support strategic decisions in automotive loan approvals.
  - Collected and cleaned real-world business data, incorporating macro- and micro-economic factors.
  - Leveraged time-series analysis and Bayesian optimization techniques for enhanced accuracy.
- *Loss On Sale Forecasting for NPLs*
  - Built predictive models to estimate losses on Non-Performing Loans(NPLs), improving the bank's credit risk management.
  - Applied techniques like coarse classing, binning, and memory optimization to improve performance.

### Freelance

- *Physics & Mathematics Tutor* - Provided tutoring for Physics Olympiad camp, university admissions.
- *Photographer* - Portfolio: [instagram.com/pupick.sk](https://www.instagram.com/pupick.sk) - Photographed various events and private sessions.

## EXTRACURRICULAR ACTIVITIES & ACHIEVEMENT

### Aihack Thailand 2023 - AI Hackathon

December 2023

- Created a credit risk model using a machine learning approach to forecast credit default risk.
- Performed data analysis, preprocessing, and feature engineering with linear and tree-based models.
- Awarded 1st Prize Winner & Best performance (AUC) Prize Winner.

### Stock Return Forecasting with Portfolio Optimization Project

April - May 2024

- Developed an Alpha Factor Model for stock return forecasting using Classical ML and LSTM networks.
- Designed and implemented quantitative trading strategies, leveraging historical data for backtesting.
- Integrated portfolio optimization techniques to maximize returns while minimizing risks.

### Machine Learning for Fundraising Campaigns - SAS xCBS Hackathon Season 4 | 4th Place

October 2024

- Created a targeted marketing model to improve donor outreach through a 2-stage ensemble model, achieving precise donor predictions and effective cost management.

### Investment Portfolio Analytics Dashboard Web App

November 2024

- Developed an OCR/LLM-powered system to extract and organize investment data, integrating market data.
- Built and deployed a dashboard to calculate performance metrics e.g., ROI, Sharpe Ratio, Volatility, CVaR.

### Participation in Business Case Competitions

2023

- *Hult Prize at Chulalongkorn* - Developed a social enterprise idea aligned with the UN SDGs.
- *Chulalongkorn Case Discovery x Ascend Money* - Formulated a strategy for financial services application.

### Certifications

- *Financial Engineering and Risk Management* - Columbia University November 2024
- *Machine Learning Specialization* - DeepLearning.AI & Stanford University August 2024
- *Google Data Analytics Professional* - Google July 2023

## MISCELLANEOUS

### Technical Skills

Programming Languages: Python, SQL, C++, C, HTML, CSS, LaTeX, Markdown

Programming Libraries: PyTorch, Scikit-learn, Pandas, NumPy, Matplotlib, Plotly, Streamlit

Applications: Excel, Power BI, Tableau, Git, GitHub

Languages: Thai (Native), English

Interests: Business, Economics, Politics, Books, History, Philosophy