

Teerat Pipitcharulerd

Hands-on data science and AI leader across banking, insurance, energy, and technology

10+ years across AI and data science. Hands-on delivery, team leadership, and technical-to-business translation across banking, insurance, energy, and technology.

Bangkok, Thailand

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PROFESSIONAL EXPERIENCE

PTTGC

Data Science Manager

Aug 2023 - Present | Bangkok

- Built a production Predictive Maintenance agent used by approximately 50 inspection engineers to store inspection data and evaluate machine condition; it also recommends preventive measures.
- Built a production Data Science agent used by business users to assess whether their data is suitable and feasible for data science projects and proofs of concept.
- Led the team building production price-forecasting models for crude oil, refinery products and plastics.
- Developed an ML lifecycle governance framework and secured top-management approval; began rollout communications and informal model onboarding in early 2026.
- Led a team of five data scientists on key projects such as process yield prediction and optimization, commodity price forecasting, and advanced image classification, delivering impactful insights and solutions.
- Sole technical DS lead - highest data science role in the organization.
- Review methodology and approaches for projects which engage external consultants.
- Developing polymer/materials R&D assistance using a knowledge-graph database, RAG, and adaptive workflows that adjust to detailed user discussions.
- Ran a 12-month PTTGC upskilling programme with ML lectures, weekly paper discussions, and coding sessions.
- Secured pricing and crude-sourcing stakeholder support for an internal commodity-forecasting model that outperformed the external consultant on four of five instruments.
- Selects and designs cloud solutions for AI agents that call tools and execute dynamic workflows.
- Presents data science results to top management.
- Builds internal team capability to deliver AI instead of relying on external vendors, drawing on a strong technical background.
- Prioritises approximately 10+ projects each year.
- Built an analytics platform for the data science team and extended it to plant/site teams.
- GC team delivered a production project to identify an optimal price for each customer by fitting demand curves.

AIA Thailand

Principal Data Scientist

Nov 2021 - Jun 2022 | Bangkok

Overlapping employment: Kosen Lab (Blockchain & AI Startup).

- Deliver agent-customer recommendation solution including model, metrics, testing procedure and impact assessment.
- Develop agent performance and segmentation models.
- POC handwriting recognition for document digitalization project.

Kosen Lab (Blockchain & AI Startup)

Senior Researcher

Sep 2021 - Mar 2023 | Work From Home

Overlapping employment: AIA Thailand, Techcombank.

- Implemented reinforcement learning algorithms from scratch (DQN, DDQN, DDPG, A3C) for strategy optimization in dynamic market environments.
- Personally built a production model to predict the price path of a financial instrument.
- Create models to predict future price and volatility distribution.
- Develop product recommendation using on-chain data.
- Developed algorithms for on-chain trading, farming and hedged positions using sequential decision optimization under uncertainty.

Techcombank

Lead Data Scientist

Apr 2021 - Oct 2021 | Hanoi, Vietnam

Overlapping employment: Kosen Lab (Blockchain & AI Startup).

- Led a team of 20 data professionals.
- Credit Card Acquisition: Develop propensity model, product offering model (NBO) and channel optimization model. Deliver 300,000 leads every month with recommended product and optimal channel at conversion rate of 20%.
- Designed and built the initial data lake and migrated credit-card data into it for analytics.
- Personally built a production credit-card churn model.
- Credit Risk Model: Develop credit risk model for New and Existing customers using advanced ML techniques.
- Business Banking: Develop churns model, sale forecast model, and loan propensity model for 48,000 SME customers. All models have been rolled out, and business impact is being measured.

Siam Commercial Bank

Lead Data Scientist

Dec 2018 - Apr 2021 | Bangkok

SCB10X Project | Dec 2018 - Jan 2020

Data Science Division | Feb 2020 - Apr 2021

- Delivered insurance propensity-to-buy, product-offering and ticket-size models that improved revenue by THB 800 million in 2020.
- Personally implemented production PD and insurance-propensity models.
- Managed the team delivering LGD, EAD, loan-propensity, and bank-wide next-best-offer models.
- Evaluated 14 million customers monthly.
- Customer Lifestyle Extraction: Lead a team of 2 data scientists to extract customer lifestyle from credit card, transfer, and payment transactions. The extracted lifestyle is used in propensity model and improves predictability of the model.
- Corporate & SME: Deliver risk early warning model to classify Corporate and SME customers in risk grades. The result is used by portfolio manager to act before customers lose ability to payback loan.
- Lead team of data scientist and data engineer to build new data infrastructure for lead generation.
- Design, implement and maintain data pipeline for analytics platform.
- Used Spark/Databricks while leading data and risk analytics at SCB Thailand.
- Personally conducted A/B tests for a propensity model at SCB.
- Personally managed the Databricks environment for the SCB10X project, integrated data from multiple sources, and connected it to the analytics platform.

Agoda

Data Scientist

Jul 2017 - Dec 2018 | Singapore

- Ran NLP search optimization processing 2 billion search entries daily using Scala and Apache Spark.
- Deployed the search-intent NLP model to production, generating an additional 200 bookings per day.
- Personally built a production model predicting advertisement-template conversion rates to select the best template for each search term from approximately 8-10 candidates.
- Personally conducted A/B tests at Agoda to optimize advertisement-template serving to customers.
- Develop system to extract destination from SERP (Search Engine Results Page) using internal database and build algorithm to continuously update the database from additional sources.
- Develop NLP model to extract destination's city, type and other related information from raw text.
- Develop model to predict performance of ad with text input from ad template.
- Estimate impact of keywords used in template and feed back to ad generation team.

Standard Chartered Bank

Senior Analyst, Quantitative Process Optimization

Nov 2015 - Jun 2017 | Singapore

- Developed IFRS 9 for forward looking PD, LGD, and EAD models by using obligor information, internal risk rating, and key macroeconomic variables as predictors on following portfolios: Singapore Mortgage, Hong Kong Mortgage, Korea Personal Loan, Indonesia Personal Loan, and India Personal Loan.
- Designed customer segmentation and calibrated PD, LGD, and EAD models for each segment using Generalized Additive Model (GAM) to capture non-linear relationships and Adaptive Lasso to avoid overfitting.
- Created framework for choosing proper treatment of macroeconomic variables to avoid recognition of spurious relationship between macroeconomic variables and historical credit loss.
- Worked with each portfolio's retail credit modeling team to understand product features, obligor behavior, and key risk drivers.

PwC Consulting

Senior Associate, Risk Consulting

Aug 2014 - Nov 2015 | Bangkok

- Assessed provision and LGD models for Tri Petch Isuzu Leasing using 10.8 million rows and 33 columns of data.
- Recommended model improvements for Tri Petch Isuzu Leasing; received management approval within the third meeting / first month.
- Improved Tri Petch Isuzu Leasing's existing models and developed a Markov model alternative.
- Developed a credit stress-testing econometric model for Government Savings Bank relating defaults to macroeconomic variables using 1997-2014 history.
- Conducted scenario analysis for Tri Petch Isuzu Leasing to quantify impacts and support credit-policy decisions.

EY

Senior Consultant, Risk Consulting

Jul 2013 - Jul 2014 | Bangkok

- Developed B-Score, TTC PD, LGD and EAD models for the Bank of Ayudhya Basel II engagement.
- Validated B-Score and EAD models for TMB Bank.
- Recommended model and data governance practices for TMB Bank.
- Forecast individual ATM withdrawal amounts for Siam Commercial Bank to support cost optimization.
- Validated and reweighted A-Score models for Bank of Ayudhya.
- Conducted workshop on credit stress testing model for Bank of Thailand.
- Developed B-Score, TTC PD, LGD and EAD models for Kiatnakin Bank.
- Conducted workshop on credit stress testing model to comply with Bank of Thailand's regulations.

Government Pension Fund

Assistant Manager, Investment Risk Management

May 2012 - Jun 2013 | Bangkok

- Monitored Value-at-Risk (VaR), Tracking Error (TE) and performed stress testing for AUM USD 22bn funds.
- Tracked, analyzed, and reported source of return and performance of each investment portfolio to understand how each fund manager produces returns and avoid taking windfall return into performance evaluation.
- Reviewed risk related assumptions to reflect uncertainty in investment circumstance to ensure current risk assessment system could reflect true risk exposure.

PTT Exploration and Production

Analyst, Commercial & Strategic Planning

May 2011 - Apr 2012 | Bangkok

- Conducted DCF Model under Oil & Gas fiscal regime of each investment project to support further investment decisions (scenario analysis, expansion, M&A, commercial negotiation, abandonment strategy) for Iraq, Algeria, Oman, Egypt, and Vietnam projects.
- Consolidated technical, legal, taxes and other related regulation into financial model for project feasibility study.
- Quantified project risks, and support in project risk mitigation with Risk Management team to balance risk level and project economics value.

Siam Cement Group

Assistant Manager, Risk & Insurance Management

Apr 2008 - May 2011 | Bangkok

- Assessed and monitored enterprise risk and reported to risk management committee on quarterly basis; updated risk mitigation activities to Management Committee on monthly basis.
- Assessed business impact from major supply chain disruption; involved in loss mitigation plan including insurance program design, Business Continuity Management (BCM) and crisis communication plan.
- Negotiated price and term of insurance program for the whole SCG group to cover possible risk events.

EDUCATION

MSc Finance | Chulalongkorn University

Banking & Finance English Program

May 2009 - Oct 2011 | GPA 3.56

BE Engineering | Chulalongkorn University

Mechanical/Automotive

Jun 2004 - May 2008 | GPA 3.09

CERTIFICATES

Financial Risk Manager | Global Association of Risk Professionals | 2012

SKILLS

ML/AI

TensorFlow / PyTorch / JAX / Scikit-learn / Deep Learning / NLP / LLM/GenAI / Reinforcement Learning

LLM/Agent

LangChain / LangGraph / RAG pipelines / prompt engineering / multi-agent orchestration

Data Engineering

Python / PySpark / SQL / Data Pipeline / ETL / Python Parallel Computing

Cloud/DevOps

AWS SageMaker / Azure Databricks / Azure OpenAI / Google Cloud Platform / Docker / MLOps

Domain

Credit Risk / IFRS9 / Basel II/III / Hedging / Derivatives / Quantitative Finance

Additional methods & tools

Scala / Apache Spark / Parquet / Amazon S3 / A/B testing

Semantic and retrieval systems

Knowledge-graph database / Chroma vector retrieval / OCR/handwriting recognition

Methods evidenced by employment

Generalized Additive Models (GAM) / Adaptive Lasso / Markov modelling / Econometric stress testing / Customer segmentation / Propensity modelling / Next-best-offer modelling / Credit-risk PD/LGD/EAD / DQN / DDQN / DDPG / A3C