

Truc-Viet Le

Data Scientist / AI Engineer

contacts

vietexob@gmail.com
https://trucvietle.me
in://truc-viet-le
git://vietexob

languages

Vietnamese: native
English: fluent

skills

data pipelining
graph data modeling
network visualization
machine learning &
deep learning for
structured &
unstructured data
natural language
processing (NLP)
large language models
(LLMs) & generative AI
operations research &
optimization (CPLEX)
cloud computing
agile & scrum
big data (Hadoop)

programming

Python, Java, Scala
R, CPLEX, Bash
HTML, JavaScript
Spark, Hadoop, SQL
♥ Linux, macOS

interests

data science (DS) for
financial risk & controls
anti-money laundering
(AML) & fraud detection
e-commerce &
payment analytics
network analysis &
visualization
NLP & chatbot

experience

jan 2024 – present

EFG International

Singapore

Senior Data Scientist (VP)

- Developing use cases using GenAI and LLM technologies for bankwide uses to increase productivity (e.g., RAG system for internal doc search, internal GPT-based chatbot).
- Developing AI solution for Compliance and AML: Transaction monitoring, entity resolution and knowledge graph models of counterparties.

dec 2021 – dec 2023

Credit Suisse AG (a UBS Group company)

Singapore

Senior Data Scientist (AVP)

- Developed machine learning (ML) solutions to entity resolution problem in transaction monitoring for AML purposes in private banking with high level of automation and accuracy (>95%) in production.
- Using advanced NLP, knowledge graph and network analysis for external entity ontology, data mastering and subgraph mining and extraction for AML risk and controls.

sept 2019 – nov 2021

Agoda (a Booking Holdings company)

Singapore

Data Scientist

- Developed “matching algorithms” using machine learning on structured/unstructured data to map duplicate properties across different suppliers (Airbnb, Booking.com, Agoda) in order to improve search, ranking and recommendations.
- Productized the mapping pipeline that processes millions of pairs of properties and rooms daily with high precision and recall.
- Developed image deduplication algorithms that aggregate property galleries in order improve content quality and conversion rate.

jul 2017 – jul 2019

SAP Asia Pte. Ltd.

Singapore

Machine Learning Developer

- Worked on automating the enterprise accounting processes (cash application, invoice digitization) using machine learning. [Link]
- Invented methods to solve the complex multi-match problem in the cash application process with three approved U.S. patents.
- Proposed an effective approach to generate payment advices from bank statement (BS) memo lines using named entity recognition (NER) that boosts the accuracy of matching BS to open invoices.

education

jan 2013 – jun 2017

Ph.D. in Information Systems

Singapore Management University, Singapore

Thesis: An integrated framework for modeling & predicting spatio-temporal phenomena in urban environments [Link]

publications

Jonathan Chase, Jiali Du, Na Fu, **Truc Viet Le** & Hoong Chuin Lau. **Law Enforcement Resource Optimization with Response Time Guarantees**. The 2017 IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2017), Honolulu, Hawaii, USA.

Truc Viet Le, Baoyang Song & Laura Wynter. **Real-time Prediction of Length of Stay Using Passive Wi-Fi Sensing**. The 2017 IEEE International Conference on Communications (IEEE ICC 2017), Internet of Things (IoT) Track, Paris, France.

Truc Viet Le, Richard Oentaryo, Siyuan Liu & Hoong Chuin Lau (2017). **Local Gaussian Processes for Efficient Fine-Grained Traffic Flow Prediction**. IEEE Transactions on Big Data (TBD) Special Issue on Urban Computing, 3(2), 194–207.

Truc Viet Le, Siyuan Liu & Hoong Chuin Lau. **A Reinforcement Learning Framework for Trajectory Prediction Under Uncertainty**. The 22nd European Conference on Artificial Intelligence (ECAI 2016), The Hague, Netherlands.

Truc Viet Le, Siyuan Liu, Hoong Chuin Lau & Ramayya Krishnan. **Predicting Bundles of Spatial Locations from Learning Revealed Preference Data**. The 14th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2015), Istanbul, Turkey.

Truc Viet Le, Siyuan Liu, Hoong Chuin Lau & Ramayya Krishnan. **A Quantitative Analysis of Decision Process in Social Groups Using Trajectories**. 13th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2014), Paris, France.

patents

Truc Viet Le, Sean Saito, Rajalingappaa Shanmugamani & Chaitanya Joshi. **A Graphical Approach to the Multi-match Problem**. Issued Jun 11, 2020. Patent no.: US20200184281A1.

Sean Saito, **Truc Viet Le**, Rajalingappaa Shanmugamani & Chaitanya Joshi. **Representing Sets of Entities for Matching Problems**. Issued Jun 4, 2020. Patent no.: US20200175559A1.

Rajalingappaa Shanmugamani, Chaitanya Joshi, Rajesh Arumugam, Sean Saito & **Truc Viet Le**. **Utilizing Embeddings for Efficient Matching of Entities**. Issued Jun 18, 2020. Patent no.: US20200193511A1.

media appearances

mar 25, 2018 **Gave a talk at FOSSASIA 2018** Singapore
Machine Learning for Smart Cities. [Link]

apr 18, 2016 **Gave a talk at Python User Group** Singapore
Reinforcement learning using Python. [Link]