Teerapat (Ted) Chaiwachirasak

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- Three years of experience working on hotel recommendation systems at scale on an online travel booking platform with millions of travel bookers and accommodation partners.
- Focused on recommender systems, natural language processing, and machine learning in a production environment.
- Looking for an applied research internship in natural language processing and/or recommendation systems to apply my knowledge and background to build impactful products.

EDUCATION

University of Toronto	Expected December 2022
Master of Science in Applied Computing (MScAC)	*Toronto, ON*
Sirindhorn International Institute of Technology (SIIT)	Aug 2021 - May 2018
Computer Engineering - Intelligent System Track	*Bangkok, TH*
Metropolia University of Applied Science	Jan 2018 - May 2018
Exchange Studies in Information Technology	*Helsinki, FI*

EXPERIENCE

Data Scientist *Agoda Co, Ltd.* — Mar 2020 – Aug 2021
- Applied machine learning, deep learning, and statistical methods on user-generated data to improve the hotel ranking system and maximize the company's number of bookings, revenues, and lifetime values.
- Improved the existing hotel recommendation system by constructing Hotel2Vec embeddings from user views behaviors using TensorFlow, resulting in a significant win on an A/B experiment with 0.74% bookings uplift.
- Applied a LISTwise ExplaiNer (LISTEN) algorithm to learn insights from hotel ranking results obtained by the deep recurrent neural network model (Bi-LSTM), of which insights were used for the team's strategic decision.
- Implemented a web app to interactively evaluate hotel ranking results on the ranking service, using React.js.

Machine Learning Engineer *Agoda Co, Ltd.* — Sep 2018 - Mar 2020
- Implemented machine learning products from end-to-end, from preprocessing the training data using Spark, serving the trained models on production codebase written in Scala, and deploying the new features with in-house tools.
- Analyzed terabytes of traffic data with Impala and Hive Queries to identify bottlenecks in the ranking and recommendation service. Once able to identify the cause of timeout errors thought to be a latency issue, improving the ranking service's success rate back to 99%.
- Optimized the hotel recommendation model's data size by using Scala's standard serializer instead of MLeap, drastically reducing the service's uptime by 80% (from 20 minutes to 4 minutes per server).
- Set up the CI/CD process to automate docker deployment, integration test, and load test on TeamCity, tremendously shortening the deployment process which would have taken approximately 4 hours to do manually.

Data Scientist Intern *Total Access Communication Public Company Limited (dtac)* — Jul 2017 - Aug 2017
- Implemented the sentiment classifier on Thai social media listening platform using Bidirectional long short-term memory (Bi-LSTM) on Word2Vec embeddings - f1-score of 0.74, 20% higher than the N-gram baseline.
- Coded a platform for the call-center team to label the social media comment's sentiment to solve the lack of labels.

AWARDS/PUBLICATION

Vector Scholarship in Artificial Intelligence
- An entrance award for top students pursuing AI master's degrees in Ontario

Publication
- A. Lertpiya, T. Chaiwachirasak, et al., "A Preliminary Study on Fundamental Thai NLP Tasks for User-generated Web Content," 2018 International Joint Symposium on Artificial Intelligence and Natural Language Processing (iSAI-NLP), 2018, pp. 1-8, doi: 10.1109/iSAI-NLP.2018.8692946.

TECHNICAL SKILLS

Languages: Python, Scala, JavaScript (React, Node, Express), SQL
Machine Learning: Linear/Logistic Regression, K-NN, Decision Trees, Support Vector Machine (SVM), Neural Networks, Random Forests, Ensembles method (Bagging, Boosting, Stacking), K-Means Clustering, PCA
Deep Learning: MLP, CNN, RNN (LSTM, GRU), Attention Mechanism, Transformers, Word2Vec, GloVe, BERT
Python Packages: TensorFlow, PyTorch, NumPy, pandas, Scikit-learn, NLTK, Matplotlib, Seaborn, Plotly
Others: Nvim, JetBrains, pyenv, virtualenv, poetry, git, GitHub, Vimium, Docker, SQL