Noppayut Sriwatanasakdi

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EXPERIENCE

Square Enix AI & Arts Alchemy Co., Ltd.   Sep 2022 – Present
Natural Language Processing Engineer   Tokyo, Japan

- Work on natural language understanding and generation capabilities of virtual avatars. Involve in both research and development (R&D) and engineering.
- Lead the development of a machine learning (ML) tool web application for non-technical users. Responsible for project management, direction setting, system design and development of the back-end. This tool allows users to manage datasets, create ML models and experiment with them before actually integrating into virtual avatars.
- Collaborate with game designers to integrate AI into products by designing training data, creating models and supporting model integration. Provide guidelines for prompt engineering and using large language models (LLMs) to accelerate the product development. Also contribute to the R&D of requested features.
- Develop automatic evaluation metrics and guideline based on user preference. Reduce hours of human evaluation to roughly five minutes.
- Develop and maintain productivity tools such as audio processing and data annotation tools.
- **Tools**: Python, C++, PyTorch, Transformers, TRL (Transformer Reinforcement Learning), OpenAI, vLLM, Triton inference server, gRPC, ONNX, Docker, Google Cloud Platform, FastAPI, Pydantic, PostgreSQL, Redis

Asurion Japan Holdings G.K.   Nov 2019 – Aug 2022
Data scientist   Tokyo, Japan

- Developed AI/data solutions to support smartphone protection services of major Japanese carriers. Acted as a technical consultant and a developer for other business units. Presented demo and performance estimation to business users. Collaborated with DevOps to deliver services. Led development and/or maintenance of several projects:
- `Troubleshoot Chatbot`: A chatbot that solves user's smartphone issues by showing relevant FAQ articles. Achieved 10% gain in absolute trouble resolution rate and 25% in answer display rate over the previous system. Served 30k users per month in average.
- `Keyword suggestion`: attached to a search box, this system helps users find right keywords to reach desirable FAQ articles. The system can lead users to the solution articles roughly 80% of time on queries that can be resolved. Receive 1,000 queries/day.
- `Webclaim validator`: a system for validating user input when filing a device claim through web channel. Significantly reduce the cost of using human validators. Serving 30-40 claims per day.
- `Telemetry trouble prediction`: a method to predict smartphone issues using real-time telemetry data (e.g. app usage history). The method is more accurate than guessing with most-common-trouble baselines in top 3, 4, and 5 predictions by large margins.
- Other projects such as identification of topic boundaries in conversations, customer behavior analysis, user comment classification and development of text analytic tools for non-technical users.
- **Tools**: Scikit-learn, XGBoost, Gensim, PyTorch, Torchtext, Transformers, Matplotlib, Seaborn, MeCab, Pandas, Docker, Flask, FastAPI, AWS EC2, Lambda

Works Applications Co., Ltd.   Apr 2018 – Oct 2019
R&D Engineer   Tokyo, Japan

- Worked on research and development of machine learning and NLP solution to business problems such as FAQ chatbot, facility management, resignation prediction, etc.
- **Tools**: Pandas, PyTorch, Seaborn, Scikit-learn, Google Cloud Platform (GAE), Java, Spring, NLTK, Javascript

EDUCATION

Osaka University   Apr 2016 – May 2018
Master of Information Science and Technology

- Focused in data mining and machine learning
- Thesis: Classification in Evolving Data streams with Concept Drift Detection

Chulalongkorn University   Jun 2011 – Jun 2015
Bachelor of Engineering in Computer Engineering

- First class honors, GPA: 3.78/4.00

SKILLS

Professional skills : Machine learning, Natural Language Processing, Data mining, System design, Data visualization
Languages : (Preferred) Python, C++, (Experienced) Java, C, TypeScript, Matlab, Scala
Tools (AI/ML/Viz) : Scikit-learn, PyTorch, XGBoost, Transformers, ONNX*, Gensim, Pandas, Numpy, vLLM, Triton, Matplotlib, Seaborn
Frameworks and Environments : Git, Jupyter lab/notebook, Linux command line, Docker, Amazon AWS (EC2, Lambda, ECS, etc.),
Google Cloud Platform (Compute Engine, Cloud Run, etc.), FastAPI, Flask
Experienced tools : MySQL, Redis, PostgreSQL, Spring framework, Selenium

LANGUAGES

Thai : Native
English : Professional working proficiency (TOEIC 960/990 – 2017, TOEFL-iBT 102/120 – 2019)
Japanese : Limited working proficiency (JLPT N2 – 2017)

AWARDS, HONORS, AND EXTRACURRICULAR EXPERIENCES

Lecturer and mentor, the 4th and 5th Creative AI Camp by CPALL   Nov 2021 – Dec 2022

Winner team of the Thailand NLP Hackathon   Jul 2020

Master degree student with Japanese Government Scholarship (Monbukagakusho)   Apr 2016 – Apr 2018

Teaching Assistant (TA), Java class, Osaka University   Oct 2016 – Feb 2017

PUBLICATIONS

[1] Chairatanakul, N., **Sriwatanasakdi, N.**, Charoenphakdee, N., Liu, X., and Murata, T. "Cross-lingual Transfer for Text Classification with Dictionary-based Heterogeneous Graph", In: Findings of EMNLP 2021. (Long paper)

[2] **Sriwatanasakdi, N.**, Numao, M., and Fukui, K. "Concept Drift Detection for Graph-structured Classifiers under Scarcity of True Labels", In: Proc. of ICTAI, 2017. (Long paper)

OPEN SOURCES AND SIDE PROJECTS

My open source contributions and hobby projects. See more on my Github.

NVIDIA/FasterTransformer #460
- FasterTransformer (FT) is Nvidia's highly optimized transformer models for inference. Fix bugs in a script to convert Huggingface's Japanese GPT2 to FT model.
- Note: FT development is discontinued and transitioned to TensorRT-LLM.

PyThaiNLP/pythainlp #723, #735, #751, #752
- Thai language NLP toolkit. Implemented new features such as keyword extraction and Thai-to-English transliteration. Bug fixing and documentation.