

# Noppayut Sriwatanasakdi

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## EDUCATION

### Osaka University

Apr 2016 – May 2018

*Master of Information Science and Technology*

- **GPAX:** 4.00/4.00

### Chulalongkorn University

Jun 2011 – Jun 2015

*Bachelor of Engineering in Computer*

- **GPAX:** 3.78/4.00 (First class honors)

## EXPERIENCE

### Asurion Japan Holdings G.K.

Nov 2019 – Present

*Data scientist*

Tokyo, Japan

- Provide data-driven solution to support activities related to smartphone protection insurance ranging from device claim process to operations in customer support centers of major Japanese mobile carriers. Act as a technical consultant and a developer for other business units. Present demo and performance estimation of a solution to business users. Lead development and/or maintenance of the following projects.
- **FAQ Chatbot:** FAQ chatbot to solve user's smartphone issues. Achieved 10% and 25% gains over previous system in absolute trouble resolution and answer display rates respectively. Serving 30k users per month in average (MAU).
- **Keyword suggestion:** a keyword suggestion system that shows search keywords relevant to user input for easier access to the right FAQ articles. This system is being used in multiple services.
- **Webclaim validator:** a system for validating user input when filing a device claim through web channel. Significantly reduce the cost of human validator. Serving 30-40 claims per day.
- **Telemetry trouble prediction:** a method to predict user's smartphone issues using real-time telemetry data (such as 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.
- **Conversation Segmentation:** a tool for segmenting a conversation between a customer and a call center agent. A conversation is segmented into multiple parts including greeting, user verification, trouble hearing, etc.
- **Text analytic tool:** a text analytic python package for in-company use. Key features include keyword ranking, conversation segmentation, sentiment analysis on product review domain, and wordcloud visualization.
- Performed various ad-hoc data analyses to learn about customer behavior (goal depends on analysis theme).
- Developed a method to classify topics of a customer comment
- **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

### Guru Square Co., Ltd.

Mar – Sep 2015

*Part-time programmer*

Bangkok, Thailand

- Worked on Thai language sentiment analysis, image processing, and computer vision projects.
- **Tools:** Apache Spark, OpenCV, Scikit-learn

### Thomson Reuters (Thailand) Ltd.

Jun – Aug 2014

*QA programmer intern*

Bangkok, Thailand

- Automated Web UI test cases using Selenium WebDriver.
- Refactored report generation module to improve its overall performance and readability.

## Japan Advanced Institute of Science and Technology

Internship student

Mar – May 2014

Ishikawa, Japan

- Interned in computational neuroscience lab under Assoc. Prof. Hirokazu Tanaka's supervision
- Designed and implemented psychophysical experiments to find relationship between pupil dilation and memory load.

## SKILLS

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**Professional skills** : Machine learning, Data mining, Natural Language Processing, Data visualization

**Languages** : (Preferred) Python, Java, (Secondary) C, C++, JavaScript, Matlab, Scala

**Tools (AI/ML/Viz)** : Scikit-learn, PyTorch, XGBoost, Transformers, Gensim, Pandas, Numpy, Matplotlib, Seaborn

**Frameworks and Environments** : Git, Jupyter lab/notebook, Linux command line, Docker, Amazon AWS (EC2, Lambda, ECS, etc.), Google GCP, FastAPI, Flask

**Experienced tools** : MySQL, Spring framework, Selenium

## LANGUAGES

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**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

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### Lecturer and mentor, the 4th CAICamp by CPALL

Nov – Dec 2021

- Gave a lecture on deep learning to 40 high school students and several CPALL PLC. employees.
- Acted as a co-mentor for a team of 4 high school students in a competition to solve real business problems with AI. The team won the competition and received 100,000 THB. (approx. 344,000 JPY)

### Winner of the Thailand NLP Hackathon

Jul 2020

- Ranked first place in Thailand online hackathon 2/2020 for the natural language processing task. Teamed up with Noppayut Sriwatanasakdi and Nuttapong Chairatanakul. This competition was organized by the Artificial Intelligence Association of Thailand (AIAT). Prize: 20,000 THB (approx. 69,000 JPY).

### Master degree student with Japanese Government Scholarship (Monbukagakusho)

Apr 2016 – Apr 2018

- A scholarship granted by the Japanese government for studying masters degree at Osaka University. The scholarship covers flight tickets, tuition fees, and monthly allowance

### Teaching Assistant (TA)

Oct 2016 – Feb 2017

- Instructed undergraduate students in Java programming class

## PUBLICATIONS

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[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)

## PROJECTS

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Some selected projects. See more on my [Github](#).

### IO-LM

- A language model that speaks like an information-operation-ist (IO) in Thai language based on Multi-head attention model in PyTorch. Trained on news articles from a highly politically-bias publisher.

### COVID-QA-Troll

- A Question-answering system that always responds with false covid-19 facts. Core building blocks include a fine-tuned Thai RoBERTa for Q&A and BM25 for document retrieval.

### MC-song-generator

- A lyrics generator in Thai language using Markov chains.