Cindy Trinh

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Work Experience

Data Scientist, Sponsored Products Team June 2021 – Present
Cdiscount – E-commerce company *Bordeaux, France*

- Designed, developed and deployed a machine learning-based recommender system suggesting similar products to more than 1 million customers each day. Improved conversion rate by 20 % and asserted performance on other metrics such as advertisement space fill rate and diversity of recommended products (**NLP, Scikit-learn, Python, SQL**)
- Performed data analysis to design, develop and deploy a solution that reduced expenses due to cache and lag of servers by more than 20k€/month (**Python, SQL**)
- Designed, developed and deployed end-to-end an algorithm based on time series prediction to help customer automatically allocate advertising budget on days with highest conversion rates (**Prophet, NLP, Python, SQL**)

AI Developer Intern Apr 2019 – Jul 2019
Wintics – Startup in Computer Vision which analyzes urban video streams *Paris, France*

- Developed a pipeline for fine-tuning neural networks which doubled the speed of the process (**Python, Bash**)
- Prototyped a parking spot detector showcasing neural network capabilities to potential customers (**Python, OpenCV**)
- Conducted a literature review and benchmarked state-of-the-art video object tracking algorithms
- Automated the monitoring system of a mini-computer (Jetson Nano) (**Python, Bash**)

Research and Publications

Research Intern Jul 2020 – Nov 2020
CentraleSupelec – Supervisor: Prof. Richard Combes *Paris, France*

- Designed a multi-player multi-armed bandits algorithm which significantly outperforms state-of-the-art algorithms
- Implemented and benchmarked state-of-the-art algorithms of multi-player multi-armed bandits (**Python, Cython**)
- Paper: "A High Performance, Low Complexity Algorithm for Multi-Player Bandits Without Collision Sensing Information." **Cindy Trinh**, *Richard Combes.*
- Paper: "Towards Optimal Algorithms for Multi-Player Bandits without Collision Sensing Information." *Wei Huang*, *Richard Combes*, **Cindy Trinh**. Conference on Learning Theory (COLT) 2022.

Research Assistant Dec 2018 – Jun 2019
Inria Lille, University of Lille, Team SequeL – Supervisor: Prof. Emilie Kaufmann *Lille, France*

- Extended Unimodal Thompson Sampling algorithm to Rank-one bandits
- Proved optimality of Unimodal Thompson Sampling algorithm for Unimodal and Rank-one bandits
- Implemented and benchmarked state-of-the-art rank-one bandits algorithms (**Python, Julia**)
- Paper: "Solving Bernoulli Rank-One Bandits with Unimodal Thompson Sampling." **Cindy Trinh**, *Emilie Kaufmann*, *Claire Vernade*, *Richard Combes.* Algorithmic and Learning Theory (ALT) 2020.

Research Intern May 2018 – Aug 2018
Heriot-Watt University – Supervisor: Prof. Marcelo Pereyra *Edinburgh, UK*

- Implemented and benchmarked Monte Carlo Markov Chain (MCMC) algorithms for bayesian inference (**Matlab**)
- Initiated experiments of combining Variational Auto-Encoders (VAE) to MCMC algorithms (**Python, Pytorch**)

Education

Ecole Normale Supérieure (ENS) Paris-Saclay Oct 2019 – Dec 2020
Master's degree in "Mathematics, Vision, Machine Learning" ("MVA") - with honors *Paris, France*

Ecole Centrale de Lille Sep 2016 – Sep 2019
Master of Engineering in "Data Science" and "Applied Mathematics" *Lille, France*

Skills

Programming Languages: Python (Advanced), Java (Basics), C++ (Basics), Scala (Basics)
Data Science: SQL (Advanced), Scikit-learn (Advanced), Pytorch (Intermediate), Spark (Basics)
Languages: English (Proficient), French (Native), Chinese Mandarin (Basics), Chinese Teo-chew (Native)