Thang Chu
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Education

- **University of Alberta** — Edmonton, AB
  Master of Science in Computing Science — *Jan. 2024 – Now*
  - **Relevant courses:**: AI Logics
- **University of Alberta** — Edmonton, AB
  Bachelor of Science in Computing Science; GPA: 3.96 — *Sep. 2019 – Apr. 2023*
  - **Relevant courses:**: Reinforcement Learning, Machine Learning, Data Mining, Computer Vision, Natural Language Processing, Data Science, AI Capstone, Numerical Methods, Stochastic Process, Mathematical Statistics.

Research Experience

- **Carlenton University** — Ottawa, ON
  Research Assistant - Advised by Prof. Junfeng Wen — *Oct 2022 - Present*
  - **Actor-critic bi-level optimization**: Develop a new training strategy to accelerate the convergence rate of actor-critic algorithm.
  - **Soft actor-critic asymptotic and non-asymptotic convergence rate**: Develop a new theoretical framework to prove the convergence rate and optimality of soft actor-critic algorithms.
- **University of Alberta** — Edmonton, AB
  Research Assistant - Advised by Prof. Martha White — *May 2022 - Sep 2022*
  - **Kernel representation of Gaussian Process**: Compare different parameterizations for Gaussian Process and Bayesian Linear Regression.
- **National Economic University** — Hanoi, Vietnam
  Research Assistant - Advised by Nguyen Thanh Tuan — *January 2021 - Sep 2022*
  - **Graph Transformer for predicting drug response**: Apply Graph Transformer algorithms and T-SNE to enhance drug features' extraction. Achieve 93% Pearson correlation coefficient on the test dataset.

Publications

- **Graph Transformer for Drug Response Prediction**: Chu T, Nguyen TT, Hai BD, Nguyen QH, Nguyen T. Graph Transformer for Drug Response Prediction. IEEE/ACM Trans Comput Biol Bioinform. 2023 Mar-Apr;20(2):1065-1072. doi: 10.1109/TCBB.2022.3206888. Epub 2023 Apr 3. PMID: 36107906.

Projects

- **JATT**: Build an SVM-based classifier to predict whether the patients have a large vessel occlusion or not using Pytorch with 90% accuracy.

TEACHING EXPERIENCE

- **CMPUT 267: Basics of Machine Learning (University of Alberta)**: Marked the assignments, conducted office hours, monitored forums for Q&A, created tutorials.
- **CMPUT 469: AI Capstone**: Lead TA, created quizzes, mentored and evaluated the performance of multiple student groups.
- **Deep Learning (National Economic University)**: Created assignments, created a Kaggle competition for course project, marked the exam, hosted lab sessions.
- **SU Tutor**: Tutored various students on mathematics, statistics, and computing science courses.
- **Cohere AI**: Prepared a weekly reading group to present and code for the fundamental Reinforcement Learning papers.

AWARDS

- **Dean's Honor Roll Fall/Winter** : 2019/2020/2021/2022
- **International Student Scholarship**: 2019/2020/2021/2022
- **Faculty of Science Gold Standard Scholarship**: 2019
- **University of Alberta Maple Leaf First Year Excellence Scholarship**: 2019

Skills

- **Languages**: Python, Julia, SQL, C/C++, Java, Matlab, R
- **Frameworks**: Pytorch, Pandas, NumPy
- **Technologies**: AWS, Git, Docker, Weight and Biases