Ngoc Bui

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SUMMARY

- Good in Python, C++. Familiar with Java, Typescripts.
- Good in data structures and algorithms.
- Research interests: Machine Learning (ML), Operation Research (OR).

EDUCATION

- **M.S. in Data Science and Artificial Intelligence** *2021 – now*
  Hanoi University of Science and Technology
- **B.Eng. in Computer Science** *2016 – 2021*
  Hanoi University of Science and Technology
  - GPA: 3.67/4.0
  - Thesis: A Deep Reinforcement Learning based Online Charging Scheme for Target Coverage and Connectivity in WRSNs.

EXPERIENCE

- **Research Resident** *August 2021 - present*
  VinAI Research
  - Doing research in Machine Learning group. My current topics are Distributionally Robust Optimization and Explainable AI in which I study the robustness of explanation methods (particularly, generating counterfactual/recourse explanations) for machine learning models.
- **Teaching Assistant** *August 2019 - January 2021*
  Hanoi University of Science and Technology
  - Assisting the teacher in building lecture materials, instructing students in Applied Algorithms classes. Building a Source-code Similarity System to detect programming plagiarism cheating in competitive contests.
- **Research Assistant** *December 2019 - June 2020*
  Data Science Lab - Hanoi University of Science and Technology
  - Studying the Vietnamese address standardization problem which is the process of recognizing and normalizing free-form addresses into a common standard format.
- **AI Research Intern** *July 2019 - October 2019*
  IBM Vietnam
  - Applying PowerAI Vision to visual inspection problem in the car manufacturing process. This project aims to detect dirt, dust defects in car body after painting.

PUBLICATIONS

- **Ngoc Bui**, Duy Nguyen, and Viet-Anh Nguyen. "Counterfactual Plans under Distributional Ambiguity". *ICLR*. 2022. URL: https://arxiv.org/abs/2201.12487.
- Tuan-Duy Hien Nguyen, **Ngoc Bui**, Duy Nguyen, Man-Chung Yue, and Viet Anh Nguyen. "Robust Bayesian Recourse". To be appeared in *UAI* 2022. URL: https://openreview.net/pdf?id=BqIM6SIoqgq.

- **Ngoc Bui** and Viet-Trung Tran. "A Novel Conditional Random Fields Aided Fuzzy Matching in Vietnamese Address Standardization". *SoICT*. 2019. URL: https://ngocbh.github.io/assets/pdf/ngocbh_soict_2019.pdf.

UNDER REVIEW

- **Ngoc Bui**, Duy Nguyen, and Viet-Anh Nguyen. "Covariance-Robust Minimax Probability Machines for Algorithmic Recourse". Under review. 2022.
- Duy Nguyen, **Ngoc Bui**, and Viet-Anh Nguyen. "Distributionally Robust Recourse Action". Under review. 2022.
- **Ngoc Bui**, Phi Le Nguyen, Viet Anh Nguyen, and Phan Thuan Do. "A Deep Reinforcement Learning-based Adaptive Charging Policy for WRSNs". Under review. 2022.
- **Ngoc Bui**, Tam Nguyen, Binh Huynh Thi Thanh, and Trong Vinh Le. "A phenotype-based multi-objective evolutionary algorithm for maximizing lifetime in wireless sensornetworks with bounded hop". Under review. 2022.

AWARDS & HONORS

- Best Thesis Presentation Award. *2021*
- Problem Winner in ASEAN-India Hackathon. *2021*
- Third prize in ACM/ICPC Asia - Ho Chi Minh Regional. *2017*
- Third prize in Vietnam Olympiad in Informatics. *2016*
- Silver Medal in Hung Vuong olympic summer camp for excellent students of Northern gifted high schools. *2014, 2015*
- Consolation prize in the Competition for excellent students of major high schools in the Northern delta and Coastal areas. *2015*

PROJECTS

- **GeneticPython** *2020*
  A simple and friendly Python framework for genetic-based algorithms.
  pypi: https://pypi.org/project/geneticpython/
- **SCOSS** *2020 – 2021*
  SCoSS (Source Code Similarity System) is an automatic system for determining the similarity of source codes. This system is developed focusing on detecting plagiarism in programming classes and competitive programming contests.
  url: http://scoss.soict.ai/
  source code: https://github.com/BK-SCOSS/scoss
- **Conmato** *2020*
  A Command Line Interface (CLI) for Codeforces Management Tools that helps coach to manage Codeforces groups easier.
  pypi: https://pypi.org/project/conmato/

ACTIVITIES

- Enjoy all sports particularly football and swimming.