

Nguyen Vu Thien Trang

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EDUCATION

Bachelor of Data Science and Artificial Intelligence

Hanoi University of Science and Technology (HUST)

2019 - 2023 (expected)

GPA: 3.87/4.0

Rank 1st in Data Science and Artificial Intelligence class.

RESEARCH PROJECT

Continual Variational Dropout: A View of Auxiliary Local Variables in Continual Learning

Continual Learning

- Introduce a novel method that continually applies variational dropout (CVD) to create auxiliary local variables, thus improving regularization/prior-based methods in continual learning.
- Justify the effectiveness and flexibility of the proposal on various baseline methods, priors and posteriors, and architectures, including both Deterministic Neural Networks and Bayesian Neural Networks.
- Submitted to Machine Learning journal.

COURSE PROJECT

Learning for the Future in Continual Semantic Segmentation

Computer Vision, Continual Semantic Segmentation, Deep Learning

- Apply pseudo-labeling to enable learning for the past, present, and future in one state regarding continual semantic segmentation scenarios.
- Suggest hard attention as task masking to enhance the ability to balance the stability-plasticity dilemma of the model.

Conditional Image Generation from Limited Data

Deep Learning

- Generate conditional images from a small dataset by transferring prior knowledge of a pretrained generator.

National Exams Scores Analysis and Visualization

Data Science, Exploratory Data Analysis, Data Visualization, Statistics, Machine Learning

- Give detailed description of national exam scores as well as analysis of their correlation with social and economic factors using EDA and ML techniques.
- Provide a dashboard with interactive plots for better insights on the scores.

House Prices Prediction

Machine Learning

- Infer the most likely possible decision-making rules by a variety of tree-based methods (Decision Tree, Random Forest, and XGBoost).
- Increase the performance of the regression algorithm by proposing a hypothesis on explanatory variables.

EXPERIENCE

Research Student

Data Science Laboratory, Hanoi University of Science and Technology

Apr 2021 - present

- Main research topics: Continual Learning
- Advisor: [M.S. Ngo Van Linh](#)
- Knowledge Gained: Foundations of Machine Learning, Deep Learning, Bayesian Neural Networks, variational Bayesian inference, probabilistic graphical models (GMM, LDA, VAE).

Teaching Assistant

Hanoi University of Science and Technology

Jan 2022 - Jun 2022

- Teaching assistant for Artificial Intelligence course.

SKILLS

Programming

- Proficient in Python, SQL; familiar with Java, C, C#, R.
- Proficient in machine learning and deep learning packages (PyTorch, scikit-learn).
- Familiar with data manipulating languages, libraries, and tools (SQL, PySpark, pandas, R, Excel, etc.).
- Familiar with data visualization libraries and softwares (seaborn, plotly, matplotlib, Tableau, etc.).
- Familiar with data scraping libraries in Python (Beautiful Soup).
- Familiar with designing user interfaces and desktop applications.

Math and Science Knowledge

- Completed courses in Math and Basic Science (Statistics and Probability, Algebra, Calculus, Discrete Math, Optimization, etc.).
- Completed core foundation courses (Data Science, Deep Learning, Computer Vision, Natural Language Processing, Machine Learning, Database, Artificial Intelligence, etc.).

Communication and Presentation Skills

- Able to use design and presentation tools (PowerPoint, Adobe Photoshop).
- Public speaking and presentation skills trained through course projects and lab seminars.

ACHIEVEMENTS

Bachelor of Data Science and Artificial Intelligence

Dec 2021

Scholarships for students with excellent academic achievements at HUST.

Top 0.1% in Vietnam National Exam (A1)

2019

Top 0.1% out of 312,756 candidates (A01 combination) in Vietnam National Examination.

LANGUAGES

Vietnamese

Native

English

English major, Foreign Language Specialized School