Vo Dinh Dat

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Experiences

VIS Laboratory (Startup) Hanoi, Vietnam
Machine Learning and Reinforcement Learning Researcher May 2022 - Present

- **Reinforcement Learning:** Researching and developing reinforcement learning algorithms that have the ability to learn and adapt to any complex environments
- **Game system:** Developing game environments to evaluate the algorithms in research
- **Trading:** Conducted research on reinforcement learning algorithms, with a focus on application in trading strategies
- **Data:** Researching and collecting historical stock prices from the Japanese stock market

Data Science Laboratory (BKAI - HUST) Hanoi, Vietnam
Research Student December 2022 - April 2023

- Worked on fundamental challenges in Machine Learning, with a specific emphasis on Deep Learning techniques
- Explored the application of modern Machine Learning technologies across various domains, expanding knowledge beyond theoretical concepts

Skills

- **Language:** Python (Proficiency), C/C++, Java, JavaScript, SQL
- **Mathematic:** Calculus, Algebra, Statistic, Probability, Machine Learning, Deep Learning
- **Technology:** PyTorch (Proficiency), TensorFlow, Azure ML, Google Vertex AI, HTML/CSS, JavaScript, MySQL

Educations

Ha Noi University of Science and Technology Ha Noi, Viet Nam
Data Sience and Artificial Intelligience, GPA: 3.5/4.0 2021–Now

Phan Boi Chau Gifted High School Nghe An, Viet Nam
Math Specialization, GPA: 9.1/10 2018–2021

Projects

PPO Transformer
Github Link

- Research and develop an algorithm that combines two state-of-the-art (SOTA) techniques in Reinforcement Learning (RL) and Natural Language Processing (NLP): Proximal Policy Optimization (PPO) and Transformer
- Conducting experimentation and evaluation of the PPO Transformer algorithm in episodic, partially observable game environments, with the focus on assessing the algorithm's ability to learn and adapt to any complex environments
- **Tools:** Python, Pytorch, Numpy, Numba

Deep Learning library from scratch
Github Link

- Main objective: gain a deep understanding of the Neural Network and other Optimization algorithms
- Reimplement Neural Network and Backpropagation from scratch
- Reinplement Optimization algorithms such as: SGD, Adam, RMSProp,... and packaging everything as a library
- **Tools:** Python, Numpy

Transformer from scratch
Github Link

- Main objective: gain a deep understanding of the Transformer model and attention mechanism.
- Reimplement Attention and Transformer algorithm from scratch using Python and basic Pytorch
- Training using simple Shakespeare dataset to examine to correctness of the implemented model
- **Tools:** Python, Pytorch, Numpy

Reinforcement Learning Game system
Github Link

- Designing and constructing a game system for testing and analyzing various RL techniques.
- Enhancing speed and efficiency compared to other RL environments using tools like Numba
- **Tools:** Numpy, Numba

Interests

Technology · Mathematic · Gym · Artificial Intelligience · Music ·