Nhat Pham

Education

University of Washington, Data Science and Statistics, 2018 - 2019.
Relevant Courses: CSE 143 Computer Programming II, INFO 201 Technical Foundation, CSE 154: Web Programming, CSE 416 Introduction to Machine Learning, CSE 414 Introduction to Database Systems
Average GPA: 3.97 (Cumulative)
University of Maryland, Computer Science, 2020-2022.
Relevant Courses: CMSC 132 Object Oriented Programming II (exempted), CMSC 250 Discrete Structures (exempted), CMSC 216 Intro to Computer Systems (In Progress), CMSC 351 Algorithms (In Progress)

Awards and Competitions

AIVIVN Sentiment Analysis Competition **Spring 2019**
- Design a text classification system for positive v.s negative product reviews (in Vietnamese)
- Models: word2vec + weighted average of (hierarchical) self-attention neural network, residual network.
- Final Result: 1st Place in Public Leaderboard (F1: 0.90087) and Private Leaderboard (F1: 0.90012)
- GitHub Repository: `https://github.com/petrpan26/Aivivn_1`

Emotion Recognition Competition 2019 **Fall 2019**
- Design a system to classify the emotion of the speaker from raw audio data
- Models: MFCC for preprocessing, convolutional neural network. Developed using the neural network toolbox (see below)
- Result: 8th place in the first round, invited to present in the second round.
- GitHub Repository: `https://github.com/nhatsmrt/erc`; Contest Website: `https://erc2019.com/`

Main Projects

Neural Network Toolbox **Summer 2019**
- Implement common deep learning procedures and papers using PyTorch for quick prototyping and model developing.
- GitHub Repository: `https://github.com/nhatsmrt/nn-toolbox`
- Documentation: `https://nhatsmrt.github.io/nn-toolbox/`

Arbitrary Style Transfer **Summer 2019**
- Given an arbitrary content photo and a piece of artwork, transfer the style of the artwork to the photo.
- Based on Huang and Belongie's paper "Arbitrary Style Transfer in Real-time with Adaptive Instance Normalization"
- Implemented using PyTorch and my toolbox (see above).
- GitHub Repository: `https://github.com/nhatsmrt/torch-styletransfer`

Coding Platform **Winter 2020**
- A platform to practice solving algorithmic questions and host contests.
- Technology stack: Judge0 for evaluation. Django REST Framework (Backend); React (Frontend). Deployed on Heroku
- Website: `http://codingplatform-cp.herokuapp.com/`

Experience

Project in Mathematics and Application, Mentor **2017 - 2019**
- Develop the curriculum, lecture on optimization techniques for neural networks, and supervise neural network projects for a selected group of 20-30 talented high school students from all over Vietnam.

Skills

Proficient With
1. *Java (3 years)*: Object Oriented Programming, Design Patterns, JUnit Unit Testing, Multithreadding and Concurrency
2. *Python(3 years)*:
   - Data Science, Machine Learning, Deep Learning: numpy, pandas, matplotlib, scikit-learn, pytorch, keras, Google Colab
3. *Relational DMBS and SQL*
4. Data Structures and Algorithms

Familiar With:
1. *Full Stack Web Development*: Server-side with Django; Client-side with HTML, CSS, JavaScript, ReactJS
2. *Database Technologies*: MapReduce paradigm, Spark, AsteriskDB and SQL++
3. *Others*: R (dplyr, tidyr, ggplot2, shiny), git, C, Unix, emacs

(857) 300 8127 • *nphamcs@gmail.com* • *nhatsmrt.github.io/* • *nhatsmrt*