NGHI HUYNH

Entry-Level Data Scientist | Chess Strategist

2 years of experience in Python for large scale data collection, analysis, and reporting. Proficient in data visualization and preprocessing. Proven ability to build and deploy scalable data pipelines. Passionate and thriving with the ability to apply ML techniques and algorithms to solve real-world problems.

CONTACT

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Nghi Huynh

GENERAL SKILLS

- **Data Analysis** 3+ yrs
- **Machine Learning** 2+ yrs
- **Computer Vision** 2+ yrs
- **Natural Language Processing** 1+ yrs
- **Web Development** 1+ yrs

TECHNICAL SKILLS

Programming

- **Python** 3+ yrs
- **C++, Java** 2+ yrs

Operating Systems

- **MacOS** 4+ yrs
- **Windows, Linux** 2+ yrs

Software & Tools

- **Pytorch, Scikit-Learn, Seaborn,...** 3+ yrs
- **Flask** 1+ yrs

LANGUAGES

- **Vietnamese**
- **English**
- **French**

EDUCATION

Bachelor of Science

Sept 2017 - May 2021

McGill University, Montreal, QC

Major: Computer Science and Biology **Minor**: Mathematics

Relevant Coursework: Artifical Intelligence, Applied Machine Learning, Probability and Discrete Mathematics, Fundamental of Statistical Learning, Operating Systems

Diplome d'Études Collegial (DEC)

Sept 2015 - Jun 2017

Dawson College, Montreal, QC

Program: Pure and Applied Science

EXPERIENCES

Mentor

Jun 2022 - Present

McMedHacks, Montreal, QC

a free international summer school to teach participants hands-on medical image analysis using Deep Learning (DL) in Python

Tech Stack: *Python, PyTorch, Scikit-learn, Matplotlib, Albumentations, Seaborn, Plotly, NumPy, Pandas*

Key Qualifications & Responsibilities:

- Monitor participants' questions during workshops
- Prepare assignments tailored to the workshops' materials and the applications of DL in medical imaging
- Host tutorial sessions to answer participants' questions

Machine Learning Intern

May 2022 - Jun 2022

AI4Good Lab, Montreal, QC

an intensive Machine Learning (ML) training program

Tech Stack: *Python, PyTorch, Tensorflow, Scikit-learn, Matplotlib, NumPy, Pandas, ParlAI*

Team Collaboration & Product Development:

- Proposed and initiated a multi-modal ML system to develop a mental health chatbot application
- Collaborated with a team of 4 members to integrate ideas into the product, communicated effectively to set priorities and expectations for each week
- Designed and developed an image-based sentiment analysis for emotion recognition in context using convolutional neural networks
- Built a chatbot using pre-trained state-of-the-art Natural Language Processing (NLP) models
- Integrated all components to finalize a Minimum Viable Prototype (MVP)
- Presented the MVP and technical works to stakeholders

HONORS & AWARDS

- Recognized as Top 17 finalists in the STEM Fellowship Inter-University Big Data Challenge in 2022
- Won the bronze medal in the uOttawa Entrepreneurial Idea Competition in 2021, earning $500 for the originality, and creativity
- Won the Best Segmentation/Detection Award in the McMedHacks Hackathon in 2021

MACHINE LEARNING PROJECTS

TIME SERIES ANALYSIS FOR SUICIDE RATES AND MENTAL HEALTH

May - Jul 2022

Tech Stack: *Python*, *tslearn*, *pmdarima*, *Scikit-learn*, *Matplotlib*, *Seaborn*, *NumPy*, *Pandas*

- Collected, extracted, and collated multiple **time-series data** on socioeconomic factors, suicide rates, and mental health for **193 countries** from WHO, Global Burden of Disease, and World Bank Database.
- Established a consistent cyclic link between mental health factors, suicide rates, and countries with lower socioeconomic positions by performing a **time-series clustering** technique.

KYMN-MENTAL HEALTH CHATBOT POWERED BY AI

May - Jun 2022

Tech Stack: *Python*, *PyTorch*, *Tensorflow*, *Scikit-learn*, *Matplotlib*, *NumPy*, *Pandas*, *ParlAI*

- Implemented and trained different **CNN models** on **3GB** of images to recognize **26 emotional states** based on contextual information.
- Fine-tuned multiple pre-trained **NLP models** on **five** different datasets ranging from open-domain conversations to task-oriented dialogues.

BRAIN TUMOR SEGMENTATION-MCMEDHACKS HACKATHON 2021

Jul 2021 - Aug 2021

Tech Stack: *Python*, *PyTorch*, *Scikit-learn*, *Matplotlib*, *NumPy*, *Pandas*, *Albumentations*, *OpenCV*

- Automated brain tumor **segmentation** in brain MRI by developing and training a **deterministic** semantic segmentation model with a mean Intersection over Union (IoU) score of **90%**.

COVID-19 MISINFORMATION DETECTION USING DEEP LEARNING

May 2021 - Jun 2021

Teck Stack: *Python*, *Tensorflow*, *Scikit-learn*, *SpaCy*, *Seaborn*, *Matplotlib*, *NumPy*, *Pandas*

- Prepared **metadata** to store fake and real tweets related to COVID-19 by converting tweet IDs into contents and extracted features from **200k** news articles, **20k** claims, and ground truths.
- Prevented the spread of COVID-19 misinformation on social media by detecting fake news on Twitter using a **Recurrent Neural Network** (RNN) model with **89%** accuracy.

PUBLICATIONS

Time trends and predictions of mental health and suicide rates based on socioeconomic indicators from 2000 to 2019

Nghi Huynh, Yuan Hong

2022 — The STEM Fellowship Journal Vol. 0, Issue 0, page.7

arXiv

CoAID: Detecting Misleading Information Using Deep Learning Models

Nghi Huynh

2021 — The STEM Fellowship Journal Vol. 7, Issue 1, page.89

ADS, arXiv

CERTIFICATIONS

AI4Good Lab certification

Certificate of completion for an intensive machine learning training program in summer 2022.

McMedHacks 2021 certification

Certificate of completion for the 8-week McMedHacks 2021 series, consisted of weekly presentations and workshops about deep learning and medical image analysis.

INTERESTS & ACTIVITIES

Sports:

- Chess: online bullet peak rating 2100s. Won the bronze medal in the UdeM rapid chess section 1 (Elo 1800-2000) in 2021
- Aikido: brown belt (1st kyu)

Hobby:

- Blogging: criminal stories, and machine learning stories