NGHI HUYNH

Entry-Level Data Scientist

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

SKILLS

Programming

Python
C++
Java

Operating Systems

MacOS
Windows
Linux

Software & Tools

Data Visualisation
(e.g. Matplotlib, Seaborn, ...)
Data handling/analysis
(e.g.Numpy,SciPy, Pandas, ...)
Machine Learning modeling
(e.g. PyTorch, Scikit-Learn, ...)
Web app development
(e.g. Flask, ...)

Languages

English
Vietnamese
French

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

EDUCATION

Bachelor of Science

Sept 2017 - May 2021

McGill University, Montreal, QC
Major: Computer Science and Biology
Minor: Mathematics
Courseworks:

- Artificial Intelligence
- Applied Machine Learning
- Invertebrate Brain Circuits and Behaviors
- Operating Systems

Diplome d'Études Collegial (DEC)

Sept 2015 - Jun 2017

Dawson College, Montreal, QC
Program: Pure and Applied Science

HONORS & AWARDS

- Recognized as Top 17 finalists in the STEM Fellowship Inter-University Big Data Challenge in 2022
- Won the 3^{rd} place 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

KYMN-MENTAL HEALTH CHATBOT POWERED BY AI
June 2022
Tech Stack: *Python*, *PyTorch*, *Tensorflow*, *Scikit-learn*, *Matplotlib*, *NumPy*, *Pandas*, *ParlAI*
KYMN is a smart journaling app with a chatbot to help monitor your mental health status day by day. KYMN is powered by a multi-modal ML system.

- A text-based mental health detection model using NLP techniques
- An image-based sentiment analysis using CNN models
- A pretrained NLP transformer generator chatbot model

SARTORIUS-CELL INSTANCE SEGMENTATION USING MASK R-CNN
January 2022
Tech Stack: *Python*, *Tensorflow*, *Matplotlib*, *NumPy*, *Pandas*, *imgaug*
Applying Mask R-CNN to detect and delineate distinct objects of interest in biological images depicting neuronal cell types commonly used in the study of neurological disorders.

TUMAI-ENTREPRENEURIAL COMPETITION (3RD PRIZE)
September 2021
Tech Stack: *Python*, *PyTorch*, *Scikit-learn*, *Matplotlib*, *NumPy*, *Pandas*, *Albumentations*, *OpenCV*
Big data-driven AI development, and TumAI adopts state of the art in deep learning models to better predict genetic characterization and generates possible treatment plans for clinicians to follow and customize.

BRAIN TUMOR SEGMENTATION-MCMEDHACKS HACKATHON 2021
August 2021
Tech Stack: *Python*, *PyTorch*, *Scikit-learn*, *Matplotlib*, *NumPy*, *Pandas*, *Albumentations*, *OpenCV*
A pre-trained ResUNet model to segment brain tumor in 2D images. The model performs instance segmentation with a mean IoU score of 90%.

HIDDEN MARKOV MODELS IN NEUROIMAGING DATA
Winter 2021
Tech Stack: *Python*, *Nilearn*, *Seaborn*, *Scikit-learn*, *Matplotlib*, *NumPy*, *Pandas*
A Hidden Markov Model to analyze fMRI data. The model uncovers some repeating network patterns in whole-brain fMRI data during the movie-watching task

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

McMedHacks 2021 certification

INTERESTS & ACTIVITIES

Sports:

- Chess: online bullet peak rating 2100s. Won the 3rd place 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