

TRAN XUAN LOC

Data Engineer Fresher, Machine Learning Engineer

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EDUCATION

The Bachelor of Science

University of Science

• **GPA:** 3.72

• **Achievement:**

- Submit two papers in the Knowledge Graph field.

07/2018 – present

Ho Chi Minh,

VietNam

WORK EXPERIENCE

Research Assistant

Computer Science Laboratory, HCMUS

06/2021 – 06/2022

• **Responsibilities**

- Read and summarize all research directions in Knowledge Graphs.
- Report and discuss the related articles with our team each week.
- Study the advantages and disadvantages of existing methods for further improvement.
- Integrating the advantages and analyzing drawbacks of different techniques to propose a new method.

• **Technologies:**

- Pytorch, GCNs, GAT, Knowledge Graph, CNNs, Quaternion, Tensor Decomposition.

PROJECTS

Age and Gender Prediction

- Organize and preprocess image data.
- Construct the Alexnet architecture to predict age and gender of a target image.
- Techniques: Data Augmentation, Facial Alignment and Facial Landmark Detection.
- Role: Leader, Developer.

Spark Machine Learning

- Conduct EDA and ETL using SparkSQL on Python.
- Using SparkML library to conduct classification algorithms.
- Role: Developer.

Spark and Hadoop Coding

- Analyze data by SQL and solving problems using SparkSQL on Python.
- Implement MapReduce for each problem.
- Role: Leader, Developer.

Food Texture Analysis

- Perform data cleaning using Python.
- Using PCA to transform data into low-dimensional space.
- Discover the meaning of value in each eigenvector(s) by visualizing them.
- Role: Leader, Developer.

Weather Prediction

- Crawling data from API.
- Performing EDA, data cleaning, then solving the unbalanced problem.
- Using by Multi-layer Perceptron and Support Vector Machine model to predict weather.
- Role: Developer.

House Price Analysis

- Perform data cleaning by insight from EDA.
- Analyzing and visualizing data on Python.
- Construct the architecture of model based on self-research.
- Obtain the 125th position on Kaggle competition.
- Role: Leader, Developer

StackOverFlow Exploration

- Perform EDA and ETL on StackOverFlow's survey data using Pandas on Python.
- Analyzing and visualize data for answering the target questions using Python.
- Role: Developer.

Emotion Recognition

- Organize and perform data cleaning on image data.
- Implementing the VGG-like and VGG-19 to recognize emotion.
- Techniques: AMP, Adam8bit, HaarCasscade, Data Augmentation.
- Real time testing: Camera, video, static images.
- Role: Leader, Developer.

Data Analyst with Tableau and MSSQL server

- Perform EDA and ETL using SQL on MSSQL server with Covid data.
- Visualize Covid data by using Tableau.
- Perform data cleaning by SQL on MSSQL server with Nashville Housing Data.
- Role: Developer.

TECHNIQUE SKILLS

Have a basic knowledge about:

- OOP, Data Structure
- Image Preprocessing, Machine Learning and Deep Learning.

Programming languages

Python, C++

Web Scrapping, Crawling data from API

- Extract raw data using BeautifulSoup, Selenium, and Regex.
- Analyze and organize raw data.

Perform ETL, conduct complex data analysis and report on results

- Interpret trends and patterns using Tableau, Python
- Using Python, MSSQL server, and Spark to perform ETL and EDA.

Prepare data for prescriptive and predictive modeling

Design machine learning model

Research and implement appropriate ML algorithms.

Run machine learning tests and experiments

Select appropriate datasets and data representation methods

Perform statistical analysis and fine-tuning using test results

SOFT SKILLS

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|----------------------|--|-------------------|
| • Good Communication | • Problem solving | • Time management |
| • Teamwork | • Have ability to explore and research problem | • Leadership |

PUBLICATIONS

Integrating Quaternion Graph Convolution Networks with Tucker Decomposition for Link Prediction on Knowledge Graphs

19/07/2022

Thanh Le, Chi Tran, Loc Tran and Bac Le

A Novel Integrating Approach Between Graph Neural Networks and Complex Representation for Link Prediction on Knowledge Graphs

28/11/2022

Thanh Le, Loc Tran and Bac Le

LANGUAGES

English

IELTS 5.5

INTERESTS

Camping, Reading, Gaming, Badminton.