# Bui Thi Thanh Phuong

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## **EDUCATION**

### VNUHCM - University Of Science

Thu Duc City

Bachelor of Mathematics and Computer Science major

October 2020 -Present

#### **OBJECTIVE**

Throughout my learning journey, I have come to realize the importance of self-study and knowledge accumulation. Learning is a continuous process, and I aspire to continue learning new things in my field and master the application of acquired knowledge. Alongside accumulating experience, I set additional goals to constantly update myself with new methods, such as reading articles and researching advancements in those methodologies.

## TECHNICAL SKILLS

Programming Languages: Python, C/C++, SQL (Postgres), R

Tool and Framewor: Jupyter Notebook, Git, Apache Spark, Pandas, Mathplotlib, SKlearn, Pytorch Domain Knowledge: Language Modeling, Machine Learning, Probability and Statistics, Math concepts

Others: Excel, Word, Spreadsheets

# PROJECTS

## On Retrieval-Augmented Text Generation | Python

Oct 2023 – Dec 2023

• Utilize Retrieval-Augmented Generation - RAG to query and generate text to assist language models in producing more accurate responses

Prove the Johnson-lindenstrauss lemma and its application in dimension reduction. | Python

May 2023 - June 2023

- To prove the lemma, we utilize Gaussian Random Projection to demonstrate the mapping with a probability.
- Directly apply Johnson's Lemma algorithm to perform dimensionality reduction on a dataset of 11,938 64×64 face images, then compare the performance of the lemma with the KNeighborsClassifier model.

#### Classify customer sentiment analysis | Python

Sep 2023- Oct 2023

- Using some tools in the Natural Language Toolkit library such as: Tokenization, POS tagging... to analyze text.
- Use RoBERTa Pretrained Model to evaluate customer reviews.
- Compare the above results with star ratings using the Matplotlib library.

### Hotel booking demand prediction | Python

Nov 2022– Dec 2022

• Constructing a supervised Machine Learning model to predict hotel room booking demand using scikit-learn and evaluating the model's performance metrics such as Decision Trees, Logistic Regression, and Random Forest. Determine the best model for solving the problem.

## Program in the Windows environment $\mid C++$

 $June\ 2022-\ June\ 2022$ 

- Create objects of the shape class and check if a point lies within that shape
- Find the intersection between two arbitrary objects and print a plus sign inside the intersection region
- Implement an algorithm using arrow keys to move one of the shapes, plus and minus keys to zoom in or out one of the images. In the Windows environment

## ACTIVITIES

# Summer volunteer program "Green summer"

July 2022 – August 2022

VNUHCM - University Of Science

Thu Duc City

• Create opportunities for students to participate in exchanging knowledge of Mathematics, Physics, Chemistry and Biology, while applying problem-solving skills to real-life situations

#### VIASM Mathematics Summer School

July 2022 – August 2022

VISAM

 $DakLak\ Province$ 

• Research advanced topics in Mathematics, including optimization models and linear algebra, focusing on their applications in data science