

Minh Nhut Nguyen

Internship Data Engineer

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Summary and Objective

As a passionate and detail-driven Data Engineer, I bring a solid background in software engineering, data management, and infrastructure development to the table. With a knack for designing robust data pipelines, optimizing data storage solutions, and ensuring scalability and reliability, I am enthusiastic about leveraging my expertise to tackle intricate data challenges in a dynamic professional environment. My skill set includes deep learning architectures like Convolutional Neural Network (CNN), ResNet, and YOLO, as well as various machine learning techniques. I am actively seeking opportunities to apply my skills in building and maintaining data systems, driving efficiency, and enabling informed decision-making through innovative data solutions.

Skills

- **Data management** Implemented new data storage techniques and created custom organization protocols.
- **Data visualisation** Frequently used Tableau and similar programs to create clear visual representations for non-technical stakeholders.
- **Project management** Worked with stakeholders to gather requirements and deliver findings.
- **Soft skills** Critical Thinking, Information & Digital Literacy, Problem-Solving.
- **Languages** Vietnamese (Native), English, Japanese.

Software Proficiency

- **Statistical programmes** Taable, Looker, SSAS
- **Programming environments** Visual Studio Code and Anaconda
- **Querying databases** MS SQL Server and MongoDB
- **Relational databases** MS Access
- **Programming language** Python, Java, SQL and Scala
- **Frameworks** TensorFlow, Pytorch, OpenCV, Librosa, Pandas, Numpy

Projects

● Speech to Speech with Emotional model using for Translation - *Leader* 05. 2024

Utilizing Multi-model Deep Learning Techniques, I led a project focused on audio processing. The project involved converting input speech to text using advanced models, forming coherent sentences. We then combined the processed audio with the generated text to predict the emotion conveyed in the audio. Additionally, I oversaw the translation of the content to the desired language. Integrating the predicted emotion and translation, I designed a text-to-speech model to deliver the final output.

- We employed Whisper for speech-to-text conversion and translation.
- Subsequently, we trained two models: one for recognizing the gender of the speaker and another for detecting the speaker's emotion. Following this, we developed a text-to-speech model with two additional features: gender and emotion.
- This ensured that the synthesized voice matched the speaker's characteristics while also accommodating a different language.

This project was conceived based on my idea, and I took the lead in architecting its structure and development.

● Voice Based Age and Gender Recognition - *Leader* 01. 2024

This research investigates the efficacy of Long Short-Term Memory (LSTM) networks for voice-based age and gender detection.

- Leveraging a large dataset of labeled voice samples, LSTM models were trained to predict age and gender attributes from raw voice signals. The study achieved notable accuracy rates, with age prediction accuracy reaching 61% and gender prediction accuracy achieving 93%.
- The findings suggest that LSTM-based approaches hold considerable potential for robust and accurate age and gender detection, with implications for various applications including virtual assistants, personalized healthcare, and social interaction platforms.

Throughout this project, I led the development of model architectures, implemented coding protocols, and conducted meticulous comparisons of accuracy and loss metrics across different datasets.

Education

- **FPT University - HCMC Campus** 2022 - 2026
 - Bachelor of Artificial Intelligence.
 - GPA: 8.32

Honors & awards

- **Second Prize of Student Research Competition** 04.2024

Associated with FPT University

 - Awarded for research on "Voice-Based Age and Gender Recognition"

Activities

- **Google Developer Student Club - HCMC University of Technology** 2022 - 2024

Member in Development is a part of Fessior Community.

Analyze user data for website www.gdsc.app 2022 - 2023

 - Query and process data from MySQL.
 - Use Tableau to make interactive graph/chart.

Implemented a data-driven approach to the GDSC IDEA CONTEST 2023: THiNK 05.2023

 - Leveraging market research and user feedback to refine our project.
- **Human Library FPT - Season 5: Living Voice - Stories Untold** 09.2023

Designer - Cameraman of Media team.

The following are the recommended actions for designing a Facebook post for the Human Library FPT page:

 - Utilize Adobe Photoshop and Adobe Illustrator to create the poster design.
 - Employ Adobe Photoshop and Adobe Lightroom to blend photos for the post.
 - Contract a Photographer and Cinematographer for documenting the event.

Certifications

- **Getting Started with AI using IBM Watson** 08.2023

An online non-credit course authorized by IBM and offered through Coursera.
- **Building AI Powered Chatbots Without Programming** 08.2023

An online non-credit course authorized by IBM and offered through Coursera.
- **Critical Thinking Skills for University Success** 02.2023

An online non-credit course authorized by The University of Sydney and offered through Coursera.