

# PHẠM NGỌC QUÂN

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[Online Portfolio](#)  
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## EDUCATION

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**Hanoi University of Science and Technology**, Hanoi  
*Major: Data Science and Artificial Intelligence*

2021 - Present  
GPA: 3.47/4

**Thai Binh Gifted High School**, Thai Binh  
*Major: Mathematics*

2018-2021

## PROJECTS

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**The book “ 89 Functional Equation Problems”**,  
*Author*

1-4/2021

- Compiled functional equation problems, a common topic in the International Mathematical Olympiad, and is currently used by the Thai Binh Mathematics Team.

**Speech Enhancement**, NLP Laboratory (BKAI)  
*Member*

5/2023 – 7/2023

- Utilized the CMGAN model, an advanced speech enhancement model that integrates improvements from SEGAN and Transformers architectures.
- Preprocessed a public English dataset by downsampling the audio from 48kHz to 16kHz, add noise to align it with the model requirements.
- Achieved impressive results with PESQ (Perceptual Evaluation of Speech Quality) score of 3.209 and STOI (Short-Time Objective Intelligibility) score of 0.931.
- Expanded the model's capabilities through transfer learning, utilizing a 10-hour Vietnamese article dataset to fine-tune the pretrained CMGAN model.

**DB Tool**, Personal Project  
*Author*

8/2023 - Present

- Developed a robust system for handling functional dependencies within relational databases.
- Implemented algorithms to assess the compliance of a database schema with normalization standards (1NF, 2NF, and 3NF).
- Implemented algorithms to calculate minimal keys and closure sets, critical for database schema design and optimization.

## EXTRACURRICULAR ACTIVITIES

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**SOICT Innovation Club**, Hanoi University of Science and Technology  
*Member*

5/2022 - Present

- Developed a system that utilizes Django framework, Sumy, Selenium, Scipy, and KeyBert library to create an online news reader.
- The system will gather the latest technology news, automatically summarize their content, and extract relevant keywords

**NgocQuan's BLOG**, <https://blog.ngocquan.com/>  
*Author*

8/2020 - Present

- Wrote blog posts sharing about some mathematical knowledge, as well as some applications of AI in daily life.

**MaSSP InClass Competition - Housing prices in Ames**, MASSP - Math and Science Summer Program  
*Member*

7-8/2021

- Utilized Linear Regression, Random Forest, and Gradient Boosting models to address house price prediction problem, and compared their performances.

## SKILLSETS

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<b>Computer Language</b>	Python, Java, LaTeX
<b>Foreign Language</b>	English
<b>Content Creation</b>	Wrote about mathematics and AI application topics in my personal blog.

## HONORS & AWARDS

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**Third Prize for Vietnamese Mathematical Olympiad 2021**

**First Prize for the national final of the SV.STARTUP competition organized by the Ministry of Education and Training**

## CERTIFICATIONS

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<b>Machine Learning with Python-From Linear Models to Deep Learning,</b> <a href="https://courses.edx.org/certificates/ef2a7b1f194643008c13a92ee80e3769">https://courses.edx.org/certificates/ef2a7b1f194643008c13a92ee80e3769</a>	5/2023
<b>Fundamentals of Statistics,</b> <a href="https://courses.edx.org/certificates/fe09300e068942d89bbdb44a6f47dc7b">https://courses.edx.org/certificates/fe09300e068942d89bbdb44a6f47dc7b</a>	12/2022
<b>Introduction to Databases,</b> <a href="https://www.coursera.org/account/accomplishments/verify/XP9SY6BTVJR5">https://www.coursera.org/account/accomplishments/verify/XP9SY6BTVJR5</a>	3/2023