

Tuan Nguyen

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Education

University of Colorado Boulder <i>Master of Science in Data Science - GPA: 4.0/4.0</i>	2026
<ul style="list-style-type: none"> ◦ Courses: Statistical Methods & Applications (I, II), Data Mining, Machine Learning, Neural Nets & Deep Learning, Information Visualization, Modern LLMs. 	
Hanoi University of Mining and Geology <i>BS in Geophysical Engineering</i>	2015

Work Experience

Data Scientist <i>Vietnam Petroleum Institute</i>	<i>Hanoi, Vietnam June 2022 – Aug 2024</i>
<ul style="list-style-type: none"> ◦ Structured and systematized unstructured data sources, developed RAG-based and Knowledge Graph-driven chatbots to enhance query efficiency and text-based Q&A. ◦ Designed and implemented data pipelines to collect, process, and analyze offshore oil & gas operations data, enabling production forecasting and automated reporting. ◦ Built database solutions for petrophysics, including classification models and missing data prediction using LightGBM and LSTM architectures. 	
Geophysicist <i>Vietnam Petroleum Institute</i>	<i>Hanoi, Vietnam June 2016 – May 2022</i>
<ul style="list-style-type: none"> ◦ Processed and interpreted seismic data, performed modeling and mapping to identify potential drilling locations. 	

Projects

🔗 Oil and Gas Production Monitoring Web-based dashboard	2025
<ul style="list-style-type: none"> ◦ Developed and deployed a web-based dashboard to monitor production activities, streamlining reporting processes and reducing report preparation time by 70% compared to the conventional method. ◦ Tools Used: SQL, FastAPI, Dash, Plotly, Mapbox. 	
🔗 Benchmarking multimodal large language models for image classification	2024
<ul style="list-style-type: none"> ◦ Evaluated visual-language models on image classification tasks using a fusion-based approach to integrate image-derived information and enhance accuracy; benchmarked performance across models including Gemini Pro, GPT-4, and LLaVA. ◦ Tools Used: Pytorch, OpenAI, Gemini, HuggingFace. 	
🔗 E&P knowledge sharing with RAG chatbot and knowledge graph integration	2023
<ul style="list-style-type: none"> ◦ Developed an internal document-sharing web-based application integrated with a retrieval-augmented generation (RAG) chatbot system, significantly enhancing document sharing capabilities by enabling chatbot interaction with local domain data and optimizing for Vietnamese language. ◦ Tools Used: Python, Weaviate, Django, Docker. 	
🔗 VPI-Mlogs: Web-based application for petrophysical data analysis	2022
<ul style="list-style-type: none"> ◦ Developed web application for applying data tools and machine learning algorithms to petrophysical borehole data including data loading, anomalies detection, data cleaning, data visualization, missing log prediction. ◦ Tools Used: SQL, FastAPI, Scikit-learn, Streamlit, Seaborn, Plotly. 	

Publications

- **Nguyen, A.T.** 2022. VPI-Mlogs: A web-based machine learning solution for applications in petrophysics. *Petrovietnam Journal*, 10 (Nov. 2022), 46–52. DOI: [10.47800/PVJ.2022.10-06](https://doi.org/10.47800/PVJ.2022.10-06) [↗](#).
- Nguyen, T.H., Hieu, N.T., Lam, N.D., Ha, H.T.T., **Nguyen, A.T.**, Minh, T.N., Son, N.H., and Huy, V.Q. 2021. Results of seismic surveys offshore the northern part of Bac Bo Gulf. *Petrovietnam Journal*, 5 (May 2021), 5–10. DOI: [10.47800/PVJ.2021.05-01](https://doi.org/10.47800/PVJ.2021.05-01) [↗](#).

Hackathon

- (2024) Top 10 Team Performance in Data Science Hackathon *CU Boulder*

Certifications

- (2022) Data Scientist Associate *DataCamp Certification*
- (2021) Seismic Signal Processing *Vietnam Petroleum Institute*
- (2020) Geostatistical Inversion. *PetroVietnam - CGG SA*
- (2018) Advanced Seismic Data Interpretation *Vietnam Petroleum Institute*

Technologies

Languages: Python, SQL, JavaScript

Database: MySQL, MongoDB, Weaviate, Neo4j

Frameworks: Scikit-learn, Torch, TensorFlow, Django, Streamlit

Platforms: Microsoft Automate, Copilot Studio, Prompt Flow

GIS Software: QGIS, MapInfo, Mapbox Studio

Petroleum Software: SLB Petrel, IHS Kingdom, Hampson Russell, Ellis Paleoscan