# Nguyen Kim Hai Bui – Bùi Nguyễn Kim Hải

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# **Personal Statement**

Result-oriented and innovative, I challenge conventions through a dual perspective mindset, constantly striving for growth. I bring strong technical expertise and research-driven problem-solving to create high-quality results.

# Experience

## Backend Developer, Butopêa

Jan 2025 – Present

- Implementing unit and E2E tests to maintain module reliability. Developing features, integrating third parties such as OTPSimplePay, OpenCart, and performing error analysis to enhance workflow performance and optimize operations to manage **more than 20.000** products.
- Tech stack: Odoo, Python, GraphQL

#### Research Intern, VietMed Team

Jun 2024 – Present

- Designing and building a synthetic/augmented data generation and processing pipeline. Conducting validation and verification of generated datasets to ensure quality and reliability.
- Create the large medical machine translation (MT) dataset and the large many-to-many multilingual ST among all domains with **290,000** samples across **5 languages** consist of Vietnamese, English, German, French, Traditional Chinese, and Simplified Chinese.
- Topics: Medical Intent Detection, Medical Multilingual Machine Translation.

### Research Intern, Modeling Lab

Sep 2024 - Sep 2025

- Developing a neural network combining Transformer Encoder architecture with Time2Vec embeddings.
- Proposing a novel approach for clustering highly correlated stocks to enhance financial prediction models. The result outperforms traditional methods by **approximately 15%**.
- Topics: Financial Prediction.

### Research Intern, Neural Information Processing Group

Jan 2025 - May 2025

- Integrating state-of-the-art 6D object pose estimation methods, including MegaPose and GigaPose, for hand manipulation tasks.
- Topics: 3D Digital Twin & Human & Applications.

# **Education**

S.B. Computer Science – ELTE, Hungary (CGPA: 4.9/5.0)	Sep 2023 – Jul 2026
S.B. Computer Science – UIT, VNUHCM, Vietnam (CGPA: 8.8/10)	Sep 2022 – Jul 2023

# **Publications & Preprints**

# Transformer Encoder and Multi-features Time2Vec for Financial Prediction

[EUSIPCO 2025]

Authors: Nguyen Kim Hai Bui, N. D. Chien, P. Kovács, G. Bognár

# MultiMed-ST: Large-scale Many-to-many Multilingual Medical Speech Translation

[Preprint]

Authors: K. Le-Duc, T. Tran, B. P. Tat, **Nguyen Kim Hai Bui**, Q. D. Anh, H.-P. Tran, T. T. Nguyen, L. Nguyen, T. M. Phan, T. T. P. Tran, C. Ngo, K. X. Nguyen, T. Nguyen-Tang

### Awards & Funds

University Excellence Fund of Eötvös Loránd University	Sep 2025
Special Prize, Hungarian National Student Research Conference OTDK 37	Apr 2025
First Prize, ELTE TDK 2024 Fall Conference	Dec 2024
Third Prize, ELTE TDK 2024 Spring Conference	Apr 2024
Stipendium Hungaricum Scholarship	Jul 2023
Consolation Prize, Vietnamese National Undergraduate Mathematical Olympiad 2023	Apr 2023
Second Prize in Math – Vietnamese Excellent Student, City level	Apr 2022

# **Technologies**

Languages: Python, JS/HTML/CSS, Java, SQL, PL/SQL, PHP, C/C++/C#, LaTeX, Clean, R, GraphQL

Software: Git, Hungging Face, Google Colab, Kaggle, Overleaf, Jira, Postman, K3s

Architectures: REST API, MVC, ORM, Monolithic

## **Courses & Certifications**

#### **AWS Educate:**

• Cloud: Introduction to Cloud 101

• Machine Learning: Machine Learning Foundation

Cisco: IoT Fundamentals: Big Data & Analytics

CS50: CS50X, CS50AI, CS50P

### DeepLearning.AI:

• Short Course: LLMs as Operating Systems: Agent Memory by Letta

#### HackerRank:

• SQL: SQL Basic, SQL Intermediate, SQL Advanced

• Problem Solving: Problem Solving Basic

• JavaScript: JavaScript Basic, JavaScript Intermediate

• Java: Java Basic

• Role: Software Engineer Intern Test, Software Engineer Test

### Kaggle:

• Deep Learning: Intro to DL

• Python: Python, Pandas

• Machine Learning: Intro to ML, Intermediate ML, ML Explainability

• SQL: Intro to SQL, Advanced SQL