

Nguyen Truc Linh

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SUMMARY

A passionate Computer Science student with experience in data analysis, machine learning, currently pursuing a bachelor's degree at Vietnamese-German University. Proficient in Python, Java, and SQL, with hands-on expertise in frameworks such as TensorFlow, PyTorch, and scikit-learn. Successfully applied data-driven solutions in projects and eager to contribute to impactful challenges through an internship.

SKILLS

Technical Languages: Python(pytorch, sklearn, tensorflow, XGBoost, matplotlib, keras,...etc), SQL(PostgreSQL, MySQL), R, Java, C++, Latex

Technical Skills: Data Storytelling, Data Collection, Data Wrangling, Data Visualization, EDA, Feature Engineering, Model Building and Evaluation, Model Deployment

Languages: English, German

PROJECTS

MultiHorizonBitcoinPriceForecasting| pytorch-lightning,nixtla,matplotlib,pandas,statsmodels

[LINK](#)

- Built a horizon-aware Bitcoin forecasting system across 5 horizons (7/14/30/60/90 days) using Nixtla's statsforecast and neuralforecast, with expanding-window CV (step = horizon) for fair, scenario-specific evaluation.
- Engineered a robust feature pipeline: target modeled as log-returns with price back-transform; stability selection across xgboost/lightgbm/random forest with bootstrapping; multicollinearity control via VIF/correlation pruning.
- Automated model selection and evaluation: statistical (AutoARIMA/ETS/Theta) and neural (iTransformer/TCN/TFT/TSMixer); metrics include MAE, RMSE, MASE, Directional Accuracy; training time tracked for efficiency comparisons.
- Delivered actionable insights: horizon-specific winners—TCN (7/14d), ETS (30/60d), TFT (90d); observed U-shaped complexity—performance pattern and concept drift between CV and holdout.
- Made it fully reproducible: parameterized via config file, deterministic seeds, timestamped artifacts and plots under results/, and CLI entrypoints for feature selection, CV, final forecasting, and visualization.

YellowFliesDetection| Ultralytics YOLOv8 Framework,JupyterNotebooks

[LINK](#)

- Implemented an object detection model to accurately identify yellow flies using a lightweight YOLOv8n architecture, suitable for edge device deployment.
- Analyzed model performance using evaluation metrics like precision, recall, and mAP to assess detection accuracy.
- Tuned hyperparameters and adjusted training settings based on metric insights to improve detection accuracy and
- Using (best.pt) trained model to detect object in images and videos, showcasing its practical applicability.

JourneyBotRAGChatbotWebsite|Python,Javascript,Chainlit,LangChain,Ollama, HuggingFace

[LINK](#)

- Develop a Travel Assistant to provide customized travel recommendations and itineraries based on API data, embedded PDFs, and knowledge of the Ollama model.
- Create a pipeline to extract, split into chunks, and vectorize PDF content using sentence transformer model.
- Store vector embeddings on Pinecone Vector Database cloud platform.
- Enhancing UI Interface with animations and responsive design, allow users to directly attach file.

Work Experience

TMA Solutions

Feb 2025 – May 2025

AI Engineer Intern

- Build an automated data collection tool using OpenCV, Mediapipe Holistic, featuring gesture-based recording triggers and perform real-time extraction of multi-modal landmarks, and finally saving structured sequences into parquet format.
- Developed a training solution by building a data pipeline with sophisticated augmentation (affine transforms) and creating a novel Dynamic Loss Function. This combined approach simultaneously improved model generalization and effectively mitigated severe class imbalance by focusing on hard-to-classify samples.
- Research and adapt a custom Transformer architecture called 'Siformer', with Feature-Isolated mechanism to concurrently processes hands and lips part through separate encoder streams. Enhanced the model with a Cross-Component Attention mechanism to capture inter-part dependencies and integrated an Input-Adaptive early-exit strategy for optimized inference speed.

EDUCATION

VGU-Vietnamese-German University

B.E in Computer Science and Engineering | GPA: 8.9/10

Sep 2021 – Now

- Around 50 million VND in total of merit scholarship

FRA UAS-Frankfurt University of Applied Science

B.E in Computer Science (Double Degree) | GPA: 3.5/4.0

Sep 2023 – Feb 2024

- 6825 Euro DAAD scholarship for study-stay exchange in Germany

CERTIFICATION

Google AI Essential| Coursera | August 2024

Google Data Analytics Certificate| Coursera | September 2024

IELTS Certificate: 6.5 | IDP | April 2023