CONTACT ME

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18/08/2003

Male

SKILLS SUMMARY

- Backend: Java (Spring boot, Spring cloud).
- SQL: SQL Server, MySQL, PostgreSQL.
- NoSQL: Mongodb.
- Frontend: React, HTML, CSS, Boostrap, JQuery.
- AI (Python, TensorFlow, Explainable AI).
- Docker (compose)
  Git (basic).
  Amazon Web Services (EC2).

EDUCATIONAL PROCESS

Natural Resources and Environment University
Fourth year student
Software Technology Major
TOEIC: 670
GPA: 3.4

HỒ TUẤN KHANH

SOFTWARE ENGINEER

INTRODUCTION

I am a student at the University of Natural Resources and Environment in Ho Chi Minh City just finished year 4. My major is software technology. This is my portfolio: https://hoofkhanh.netlify.app/

WORK EXPERIENCE

Intern at “Bệnh viện nhi đồng 2”

- *Duration*: 2 months.
- *Contributions*: Perform small modules such as code debugging, code testing, learning hospital procedures, and coded the pneumonia prediction application under the guidance of the company's seniors.

PERSONAL PROJECT

Antimicrobial Peptide Prediction(Transformer + XAI + Amazon EC2)

- *Summary*: Predicted antimicrobial peptides using a Transformer model combined with XAI (LIME) to explain the result, trained on EC2 GPU.
- *Github link*: Repo
- *Data link*: NCBI Proteins
- *Tech Stack*: Python (Tensorflow), BiopPython, Transformer, LIME, Amazon EC2.
- *Contributions*:
  - Crawled raw peptide data from NCBI.
  - Split peptides >50aa into 10–50aa subsequences.
  - Extract features based on peptide sequences for model input.
  - Trained a Transformer-based model on 3 datasets (GenBank, non-GenBank, combined), all achieving accuracy close to 100%.
  - Used Amazon EC2 (GPU virtual machine) for efficient training.
  - Used LIME to explain model predictions and highlight contributing features.

Sound Service Web (Microservice)

- *Summary*: Developed a platform connecting customers with music artists, providing full features such as beat purchasing, artist hiring, job posting, real-time messaging, service reviewing, and various supporting functionalities to enhance user experience.
- *Github link*: Repo
- *Services*: User, Artist, Customer, Job, Beat, Purchase Beat, Hire, Notification (real time), Payment, Favorite, Review, Conversation (real time)
- *Tech Stack*:
  - Frontend: HTML, CSS, ReactJS
  - Backend: Java, Spring Boot, Spring Cloud (Config, Eureka, OpenFeign, Gateway)
  - Databases & Migration: PostgreSQL (JPA + Flyway), MongoDB
  - Communication: Kafka (services), WebSocket (realtime)
  - Security: OAuth2 (Keycloak)
  - Email Handling: Thymeleaf (templating), MailDev (testing)
- *Contributions*:
  - Designed and developed a scalable and maintainable microservices architecture.
  - Integrated Spring Cloud Gateway with Eureka for dynamic routing and client-side load balancing.
  - Implemented OAuth2 authentication (with access & refresh tokens) and secured user data using Keycloak.
  - Utilized Kafka for asynchronous inter-service communication and data synchronization.
  - Managed database versioning and migration using Flyway to ensure safe schema evolution.
  - Built real-time messaging and notification features using WebSocket to enhance user engagement.
  - Simulated email delivery using MailDev and rendered HTML email templates with Thymeleaf during testing.
  - Developed frontend components using ReactJS to support user interaction with features.

Pneumonia Prediction (Vision Transformer Model)

- *Summary*: Developed a web-based application to predict pneumonia from chest X-ray images using a Vision Transformer model, providing accurate and instant results.
- *Github link*: Repo
- *Tech Stack*: Python (Tensorflow), Transformer (model).
- *Data link*: data 1, data 2
- *Contributions*: Trained and fine-tuned a Vision Transformer on chest X-ray data for pneumonia detection (88% accuracy). Applied real-time data augmentation and deployed the model via a lightweight web app for instant prediction.