Huy Quang Lai

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EDUCATION

Texas A&M University   College Station, TX
Master of Computer Science   *Aug. 2024 – May 2025*
GPA 3.750 / 4.000

Texas A&M University   College Station, TX
BS in Computer Science, cum laude, Minors in Cybersecurity and Mathematics   *Aug. 2021 – May 2024*
GPA 3.609 / 4.000

EXPERIENCE

Contractor   July 2024 - Present
Total Care 2U   *Waxahachie, TX*

- Automated the end-to-end ETL (Extract, Transform, Load) process for migrating patient medical data into an advanced Electronic Health Record (EHR) system
- Ensured data integrity by validating patients' personal information for accuracy and completeness
- Designed automated quality assurance procedures to verify data consistency across systems
- Delivered detailed project demonstrations and progress updates to the team, fostering alignment and understanding

Product Owner and Developer   Aug. 2023 – Dec. 2023
Brazos Valley Council of Governments   *Bryan, TX*

- Spearheaded the development of a scalable full-stack application using Ruby on Rails, capable of managing over 400 contracts simultaneously
- Implemented and rigorously tested 85+ individual features using Cucumber and RSpec to ensure high-quality code delivery
- Acted as a liaison between developers and stakeholders to provide progress updates and gather feedback

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL (Postgres), JavaScript, TypeScript, HTML/CSS, Ruby
Frameworks: React, Node.js, Next.js, Rails, PyTorch, TensorFlow, Pandas, Numpy, Matplotlib
Developer Tools: Git, Google Cloud Platform, VS Code, AWS, PyCharm, Eclipse, IntelliJ

PROJECTS

Improving CLIP Training | *torch, Self-Supervised Learning, Contrastive Learning* Aug. 2024 – Dec 2024

- Optimized bimodal contrastive SSL models using global contrastive loss for scalable image-text learning
- Implemented SogCLR/iSogCLR, enhancing retrieval accuracy and zero-shot classification
- Analyzed optimizers and loss functions to improve model convergence and multimodal generalization

ScriptSearch | *Python, Cloud Functions, Firebase, Pub/Sub, Typesense*   Jan. 2024 – May 2024

- Co-developed a YouTube transcript search platform, enabling efficient keyword-based video discovery
- Engineered a scalable backend with Firebase and Pub/Sub for transcript indexing and search
- Delivered a functional product in a 15-week collaborative team project

Mortality Prediction Model | *Python, Jupyter Notebook, pandas, numpy*   Jan. 2023 – May 2023

- Built a predictive model for in-hospital mortality using eICU clinical data, achieving an AUC-ROC score of 0.89 with an XGBoostClassifier
- Preprocessed data meticulously, performed feature engineering, and optimized hyperparameters for better predictive accuracy
- Conducted feature importance analysis to identify critical factors influencing mortality risk