

# HUY QUANG LAI

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## EDUCATION

### Texas A&M University

*Master of Computer Science*  
GPA 3.750 / 4.000

College Station, TX

*Aug. 2024 – May 2025*

### Texas A&M University

*BS in Computer Science, cum laude, Minors in Cybersecurity and Mathematics*  
GPA 3.609 / 4.000

College Station, TX

*Aug. 2021 – May 2024*

## EXPERIENCE

### Contractor

*Total Care 2U*

July 2024 - Present

*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

*Brazos Valley Council of Governments*

Aug. 2023 – Dec. 2023

*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, gRPC

**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