Pat Tran

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EDUCATION

Georgia Institute of Technology | Atlanta, GA   January 2021 – December 2023 (Projected)

- Bachelor of Science Computer Science.
- **Threads**: Information Internetworks and People.
- **GPA**: 3.80/4.0
- **Relevant Courses**: Object-Oriented Design (Java), Data Structures and Algorithms (Java), System-Level Programming (Assembly & C), Database System (SQL).

PROJECTS

Game Launcher (C#)   May 2022 – Present

Individual Project

A game launcher with an instant image translation feature to understand the in-game tasks and rewards.

- Design login and game windows with custom buttons in the title bar using the .NET Framework.
- Utilize Tesseract OCR Engine to automatically solve the Captcha image to login with an accuracy rate of 86%.
- Create a custom Snipping Tool to capture a selected part of the screen, and utilizes an ONNX formatted pre-trained model that was trained to recognize Chinese characters to extract text from the captured image.
- Implement an algorithm to bulk translate text using the free translation APIs from the GTranslate package.

ITS-Chatbot v2.0 (Python)   August 2021 – December 2021

Team Lead of 4 members

Implement a new transformer-based approach and integrate it with the TutorJS Project.

- Implement a new process using the BM25 algorithm to retrieve the top-n relevant documents to improve processing speed by 40% while retaining the same accuracy score.
- Examine different Transformers pre-trained question-answering models using the Hugging Face library to find the best model to extract answers while balancing accuracy level and processing time.
- Develop a web scraper to retrieve the top images result of the user query.
- Create REST APIs with Flask for integration with other projects.
- Develop automated tests using PyTest and Flask-Testing to test JSON responses from the APIs.

Drone Grocery Delivery (Java)   January 2021 – May 2021

Team Member

Design and implement an online store system using the classical methodology for relational database development.

- Design an Entity Relationship Diagram that represents all functionalities of the application.
- Create MySQL stored procedures from the ER Diagram to insert, update, or delete the data inside of the appropriate table(s). Host it on AWS Relational Database Service for ease of accessibility.
- Utilize JavaFX to design the software interface and the MySQL Connector/J driver to connect the application to the Amazon database.

LEADERSHIP

Viet Hong Vietnamese School | Norcross, GA   July 2020 – May 2021

Lead IT

- Lead the weekly meetings to instruct the teachers through the necessary steps for effective online teaching and parent communication.
- Evaluate IT problems with the administrators and formulate the best solution.
- Collaborate with the IT team to create a step-by-step guide in Vietnamese to use software such as Google Meet, Google Classroom, and Google Jamboard.

SKILLS

- **Programming languages:** Java, Python, C, C#, SQL.
- **Library & Frameworks:** Pandas, NumPy, SciPy, scikit-learn, PyTorch, TensorFlow, NLTK, Spacy, Gensim, Flask, Beautiful Soup, JavaFX, AWS, JUnit, PyUnit, Rest APIs, .NET