

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 2.0 (Python)

August 2021 – December 2021

Team Lead of 4 members

Continuation of the ITS-Chatbot project from the previous semesters.

- Refine the data preprocessing class with NLTK and Spacy libraries to improve output accuracy.
- 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.
- 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).
- 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, BeautifulSoup, JavaFX, AWS, JUnit, PyUnit, Rest APIs, .NET