

# Xuan Duc Tran

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## EDUCATION

**University of Illinois at Chicago (UIC) - GPA: 4.00**

Chicago, IL

*Bachelor of Science in Computer Science - Human Centered Computing Concentration*

*Expected May 2026*

**Relevant Coursework:** Data Structures and Algorithms, Database Design, Software Design, User Interface Design, Hardware Design, Machine Learning, Calculus, Linear Algebra, Probability and Statistics

## WORK EXPERIENCES

**Data Science Intern**

June 2024 - August 2024

*FPT Software Corporation*

*Hanoi, Vietnam*

- Collaborated on building neural network and applying computer vision techniques to **20,000** housing blueprint images, aiming to develop an industrial product for scanning symbols in architectural designs
- Utilized **Python** and **Django** to load images in JSON format into **PostgreSQL** database for retrieving data and enhancing efficiency in neural network training
- Applied **YOLO** (You Only Look Once) **Convolutional Neural Network (CNN)** to automate and enhance detection of symbols in housing blueprints

**Data Science Research Fellow**

June 2023 - May 2024

*Bioinformatics Laboratory - The Marshall Lab - UIC*

*Chicago, IL*

- Utilized **Python** and **R** computing languages to analyze biological sequence data, aiming to research gut microbiomes and its impact on athletic performance
- Conducted statistical analysis on data, generated models of analysis and explored machine learning application in biology using **Keras**, **NumPy**, **Pandas**, **Tensorflow**
- Implemented **Recurrent Neural Network (RNN)** to process bioinformatics data from **13,500+** microbiomes, accurately predicting microbial communities over time

## PROJECTS

**Invisible Woman in Healthcare** | *Python, TypeScript, Flask, React, HTML, CSS*

Aug 2024

- Directed team in development of web application using **TypeScript**, **React**, **HTML**, **CSS** for front-end design, and **Flask**, **Python** for back-end processing to analyze gender bias in healthcare research papers
- Implemented bias detection using natural language processing and machine learning (**Scikit-learn**, **PyTorch**, **Tensorflow**), focusing on pronoun frequency, author gender counts, and participant gender representation
- Presented project at MIT hackathon, using **Matplotlib** and **Seaborn** for interactive data visualization and reports that received positive feedback

**Air Pollution Analysis** | *Python, Numpy, Pandas, SQL, Tableau*

Feb 2024

- Processed and analyzed hourly air pollution measurements in Seoul using **ETL (Extract, Transform, Load)** methods with **Python**, **NumPy**, and **Pandas** to produce data for environmental analysis
- Utilized **SQL** for data extraction and querying, enabling efficient handling of large datasets
- Built interactive dashboards in **Tableau** to visualize air pollution trends and measurement statuses

## TECHNICAL SKILLS

**Languages:** Python, C, C++, JavaScript, Java, R, MySQL, SQLite

**Other Languages/Tools:** Git, Unix/Linux, Visual Studio Code, Jupyter Notebook, RStudio

**Web Frameworks/Data Visualization:** HTML/CSS, React, Node.js, Django, PostgreSQL, Tableau, Matplotlib

**Data Analysis - Machine Learning:** Pandas, NumPy, Scikit-learn, Tensorflow, Keras, PyTorch, Classification/Regression Techniques, Neural Network (CNN, RNN)

## ACTIVITIES

**CS 351 Teaching Assistant - UIC** | *Mentor*

Jan 2025 - Now

- Assisting in teaching 120 person class, guiding students in building full stack projects with React and Django

**UIC Archery Club** | *Member*

Jan 2024 - Now

- Participate in UIC archery club, contributing to team training and assisting in organizing club events