

# Phuoc (Joseph) Tran

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## PROGRAMMING EXPERIENCE

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### Recurse Center

January 2021 – March 2021

*Participated in a 12-week software engineering retreat where I improved my programming skills through a study group and collaborative projects*

#### Recurse Store – [GitHub](#), [Website](#)

*A mock e-commerce platform for Recurse Center participants and alumni – React.js, GraphQL, PostgreSQL, Node.js*

- Implemented authentication with OAuth and secure transactions with Stripe API
- Architected GraphQL API endpoint with create, read, update, and delete operations
- Scaffolded and organized client interface into reusable components using React.js and Material-UI

#### Iruka – [GitHub](#)

*An educational, open-source project featuring classic data structures and algorithms with over 600 stars on GitHub – TypeScript, Jest*

- Contributed searching and sorting algorithms with 100% test coverage, including comments on implementation details and Big-O complexities

### MIT Biomimetic Robotics Lab Website – [Website](#)

October 2020 - December 2020

*The official website for the MIT Biomimetic Robotics Lab – React.js, TypeScript, Jest*

- Rebuilt the lab's website with React.js and Material-UI to achieve a modern design, a mobile-responsive user interface, and an improved user experience with search/filter features
- Implemented continuous integration using GitHub Actions, automatically running unit tests for all new changes

### Discord Trivia Bot – [GitHub](#)

August 2020

*A Discord bot that delivers trivia questions, evaluates the correctness of answers, and manages score profiles – Python*

- Utilized concurrent programming with discord.py to listen and respond to commands

### Snake Game

December 2019

*The classic snake game – C++*

- Used a double-ended queue to allow for constant time determination of the snake's location on screen, regardless of its length
- Created a high scores system to track and update top scores and the corresponding players

## WORK EXPERIENCE

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### The Summer Science Program – Teaching Assistant

June 2020 – July 2020

- Instructed 36 high school students in Python programming, college math, and astrophysics
- Guided teams of three students in an asteroid orbit determination research project

### Williams International – Military Project Engineering Intern

May 2019 – August 2019

- Collaborated with an interdisciplinary team of engineers to integrate all components of a gas turbine engine
- Created Python scripts to automate the processing and plotting of large data sets in the engine acceptance test procedure, reducing the task from hours to seconds

## TECHNICAL SKILLS

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Languages: Python, TypeScript, JavaScript, C++, Java, MATLAB

Other: HTML, CSS, React.js, Node.js, Express.js, MongoDB, GraphQL, SQL, Jest, Git, Unix,  $\LaTeX$

## EDUCATION

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### University of Notre Dame

May 2020

*Bachelor of Science, Aerospace Engineering*

GPA: 3.74

**Honors:** Sigma Gamma Tau Aerospace Engineering Honor Society, Boeing Scholar, Dean's List 2017-2020

**Relevant Coursework:** C/C++ Programming (Notre Dame), Intro to Artificial Intelligence (Notre Dame), Data Structures (Coursera), Algorithms (Coursera), Intro to Object-Oriented Programming with Java (edX)