

Kyle Phan

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EDUCATION

University of Notre Dame, Notre Dame, IN

Expected May 2025

Major and GPA: B.S. in Computer Science, 3.86

Relevant Courses: Systems Programming, Data Structures, Video Game Development, Databases, Theory of Computing, Operating Systems, Computer Architecture, Artificial Intelligence, Web Development, Distributed Systems, Algorithms, Computer Vision

EXPERIENCE

Gecko Robotics

May 2024 – Present

Software Engineering Intern

- Enhanced data analytics team workflow by building an indication tool with **Python** and **PyQt**, allowing users to label various damage types on millions of ultrasonic data points, leveraged **BigQuery** to map indications to points on respective 3D models
- Accelerate customer inspection experience and improve accuracy of repair planning reports by building frontend interface using **React** and **Three.js** that visualizes damage on a 3D representation of a given asset
- Designed **REST API endpoints** with **FastAPI** and utilized multithreading to accelerate indication upload speeds by 400%, wrote **Pytest** unit tests and used **Postman** to ensure validity of API endpoints and backend code

iCapital

June 2023 – August 2023

Software Engineering Intern

- Streamlined Rake task management by over 300% by building a full stack internal tool with **Ruby on Rails** and **React** that allows over 400 internal users to manage database changes from a user-friendly interface
- Ensured data consistency and efficient file access across distributed systems architecture for over 300 output files by creating a scalable file storage system using **Amazon Web Services S3** buckets
- Designed and implemented a suite of **REST API endpoints**, managed code state with **Redux**, wrote **RSpec** unit tests to ensure validity of backend code, and designed Rake tasks to configure permissions in a relational database for specific users

Colonist.io

August 2022 – September 2022

Software Engineering Intern

- Improved internal developer workflows for the entire engineering team by building an internal DevOps tool that automatically deletes GitHub branches when pull requests are closed
- Enhanced user experience for over 10,000+ colonist.io players by fixing various frontend bugs in the avatar shop and in the Cities and Knights game mode using **TypeScript** and **SCSS**

University of Notre Dame

August 2023 – Present

Data Structures Teaching Assistant, Programming Challenges Teaching Assistant

- Dedicate 10+ hours a week for office hours and assist students with homework challenges, taught in **C** and **Python**
- Create small group tutoring sessions within office hours that fostered an environment of collaboration among students

PROJECTS

Bytes | <https://bytes.ndlug.org>

September 2023 – December 2023

- Incorporated computer vision to allow users to take pictures of cooking ingredients and suggest recipes into full stack application
- Utilized PyTorch's pretrained **FasterRCNN** model with **ResNet50-FPN** backbone, gathered data from Google's Open Images Dataset, performed transfer learning/feature extraction by tweaking feature classification layer on 90 food items
- Deployed application on my personal Virtual Private Server on the cloud using Docker containers
- React**, **Python Django REST Framework**, **AWS RDS MySQL**, **Nginx**, **Docker**

Workout Guru | <https://workoutguru.onrender.com>

June 2022 – July 2022

- Launched a web application that allows users to craft personal workouts by "swiping left" and "swiping right", users have access to a catalog of exercises, 750+ unique users
- HTML/CSS/JavaScript**, **Python Django**, **PostgreSQL**, **AWS S3**

Egyptian Ratslap | <https://simmer.io/@kphan5/egyptian-war>

March 2023

- Built an online version of Egyptian Ratslap which has been played over 750 times in **C#** and **Unity**
- Improved concurrent performance and implemented bots that serves as the opposing player by leveraging Unity coroutines

LEADERSHIP

CS4Good

February 2023 – September 2023

Project Lead for BeFriendED

- Built a chatting feature using **Node.js**, **Express.js**, and **socket.io** along with a forum using **Django REST framework**
- Collaborated with 4 other team members, assisted in learning of **Django REST framework** throughout project

SKILLS

Programming Languages: Python, HTML, CSS, JavaScript, C, MATLAB, TypeScript, C#, Swift, Ruby, SQL, Java

Frameworks: Django, Flask, Bootstrap, Express.js, React.js, Rails, TensorFlow, OpenCV, PyTorch, FastAPI, Three.js

Misc: Amazon Web Services, Git, Node.js, MySQL, Kubernetes, Docker, Linux/Unix, Shell Scripting, Redis, Nginx, Apache Airflow