

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, 3.85

Relevant Courses: Systems Programming, Data Structures, Discrete Math, Video Game Development, Database Concepts, Theory of Computing, Operating Systems, Computer Architecture, Intro to AI

EXPERIENCE

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
- Provided engineering guidance to UI/UX designers and product managers, which impacted the visual of the end product

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

- 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

Lab for Big Data Methodology

March 2022 – August 2022

Undergraduate Research Assistant

- Utilize **HTML/JavaScript** to create a better UI experience for an open-source app where users find trends between two objects
- Lab goal is to develop better statistical methods and software in the areas of education, life science, healthy, and psychology

PROJECTS

Bytes | <https://github.com/kylephan5/bytes>

September 2023 – Present

- Incorporating computer vision feature with **Python OpenCV** so users can take pictures of their refrigerator to autofill ingredients
- Integrated **MobileNet** for image classification which results in more efficient use of computational resources and **SSD** for accurate, yet fast object detection, fine-tuned pre-trained model using **PyTorch**
- React, Python Django, 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**
- Designed a multiplayer version in local environment with **Photon**, a Unity framework for networking
- Improved concurrent performance and implemented bots that serves as the opposing player by leveraging Unity coroutines

Sol Solutions | Project: Horizon | <https://sol-solutions.vercel.app/>

March 2022

- Hackathon project with three other individuals that allow residents of Indiana to see how cost-efficient it is to switch to solar energy, lead frontend development and implemented a login form with **HTML/CSS/JavaScript, Python Flask**

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

Misc: Amazon Web Services S3, Git, Node.js, MySQL, Unity, Jira, Kubernetes, Docker, Linux/Unix, Shell Scripting, Redis