

# Richard Phong

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## EDUCATION

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**University of Houston** | Bachelor of Science in Computer Science

Expected Dec. 2024

- GPA: 3.85/4.0, Major GPA: 3.85/4.0
- Relevant Courses: *Programming and Data Structures, Operating Systems, Database Systems, Algorithms and Data Structures*
- Clubs: CougarCS - Tutor, CodeCoogs - Competitions Facilitator

## EXPERIENCE

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### NASA

Houston, TX

Software Developer Intern

Aug. 2023 - Present

- Refactored a Xamarin application to .NET **Maui**, increasing maintainability and performance.

### Paycom

Dallas, TX

Software Developer Intern

May 2023 - Aug. 2023

- Created an **ASP.NET/React WebAPI** using **FedEx APIs** to create labels and process packages.
- Replaced the current outdated third-party tool that requires external maintenance with an in-house solution.
- Streamlined package processing for over 15,000 packages weekly.
- Implemented unit tests using **XUnit** and **MOQ** for the backend and **Jest** for the frontend with **70%** coverage.

### NASA

Houston, TX

Software Developer Intern

Apr. 2022 - May 2023

- Created a desktop tool using **Razor Pages/ASP.NET** based on an Excel-exclusive tool used by ground crew/astronauts to communicate tasks/needs.
- Reduced user errors from the Excel program by restricting inputs and adding validation while improving **UI/UX**.
- Refactored code for an ASP.NET-based program used to train astronauts boarding the ISS, reducing file sizes by upwards of **60%** and **improving script speed by over 5x**.

## PROJECTS

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**Lox Interpreter/Compiler** | [github.com/rphong/Crafting-Interpreters](https://github.com/rphong/Crafting-Interpreters)

Feb. 2023 - Present

- Implemented Lox(A programming language) interpreters/compilers in **Java/C#** following the book **Crafting Interpreters** as a personal project.

**Library Database** | <https://github.com/cykadelix/Library-project>

Feb. 2023 - May 2023

- Developed a library website that allows users to browse/checkout items working in a team of 5 as a class project.
- Incorporated role/account authorization along with inventory management using **PostgreSQL** and ASP.NET MVC.
- Designed and implemented an intuitive UI for admins to manage users/employees.
- Hosted the website online using Microsoft Azure.

**Froggie Adventures** | [github.com/rphong/Froggie](https://github.com/rphong/Froggie)

May. 2022

- Created a 2-D procedurally generated platformer with **Unity** and **C#**, leading a team of 3 as a club project.
- Developed a procedural generation algorithm to dynamically create levels that scale in difficulty.
- Displayed to 200+ interested students at the annual Cat's Back(UH club fair).

**TAMUHack 2022: NFTeach** | [github.com/bnleft/NFTeach](https://github.com/bnleft/NFTeach)

Feb. 2022

- Created a video conferencing web application using HTML/CSS/JS as a hackathon project.
- Tracked user engagement by detecting changes in facial expressions with Google Vision API.
- Awarded **1st place** for **Best Use of Google Cloud API** amongst 500+ students.

## SKILLS

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**Languages:** Java, C++, C#, JavaScript, HTML, CSS, Visual Basic, TypeScript, PHP

**Tools:** Unity, Git/GitHub, Blender, VBA, Figma

**Frameworks/Libraries:** Express.js, React.js, EJS, WebRTC, Sass, JQuery, .NET, Node.js