

# James Huang

>>> [hywn.github.io](https://hywn.github.io) (personal website)

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A new university graduate passionate about doing more with less. Enthusiastic about programming, language, mathematics, and other forms of abstraction. More than fifty-odd personal projects and counting!

## Education

BS in Computer Science 2019 - 2023

From University of Virginia's School of Engineering and Applied Science.

*Relevant coursework: Programming Languages, Compilers, Software Analysis, Computer Graphics, Artificial Intelligence, Machine Learning for Natural Language Processing, Cryptocurrency*

## Tech

### Seasoned

JavaScript (Web APIs, Deno, Node.js), Java, Python, Haskell, C, HTML/CSS, Ruby, \*nix

### Experienced

Git, OCaml, SQL

### Proficient

Make, Maven, Gcov/Lcov, x86 Assembly, Microsoft Office, Wolfram Mathematica, Autodesk Inventor, cowsay

## Extracurricular

CyberPatriot 2018 - 2019

Accomplished gold tier in CyberPatriot XI's open division performing \*nix-related work for school's cybersecurity team.

Calligraphy Club 2022 - 2023

Co-founded club promoting awareness of East-Asian brush calligraphy. Held meetings twice a week. Tabled at cultural events hosted by Chinese Student Association and University Programs Council.

## Experience

Undergraduate Research Assistant (U. of Virginia) { Haskell, Rust } 2022

Used static analysis and symbolic execution techniques to develop an autograding tool that analyzes the correctness of student program submissions based on their abstract syntax trees.

[Computer Graphics TA](#) (U. of Virginia) { Python, Java } 2021

Graded assignments and held office hours helping students with various graphics-related assignments including a 2D rasterizer, 3D rasterizer, and raytracer.

Capital One Software Engineering Summit 2020

Attended summer program hosted by Capital One with "technical and soft-skill training sessions" including mobile app development and database API utilization.

[Scorebook](#) { JavaFX, SQLite, Git } 2019

Guided team through construction of JavaFX application built to specification of high-school track team. Taught team members how to use Git version control; managed pull requests.

[MonkeyGamesMC](#) { Java, MySQL, Git, Maven } 2014 - 2017

Developed and maintained Java plugins for public Minecraft server utilizing the Bukkit and Spigot APIs, Java build tools, and object-oriented design patterns.

## Selected Projects

[fb-sock](#) { JS } 2021

Reverse-engineered bits of Facebook Messenger to programmatically send stickers by directly sending MQTT messages over a monkey-patched WebSocket.

[lihh](#) { Haskell } 2020

Developed and implemented a toy programming language based on lambda calculus to demonstrate fundamental concepts like combinatory logic and recursion via the Y combinator.

[nessiebox](#) { JS } 2020

Hackathon entry that stores arbitrary data in Capital One's toy banking API by chunking and encoding file data into deposit descriptions.

[simple-Yelp](#) { Ruby (Sinatra), JS (Leaflet), HTML/CSS, Heroku } 2020

Single-page Yelp interface wrapping the Yelp Fusion API based around reactive, autocompleted search.

[schedule](#) { JS, HTML/CSS } 2019

Tool that generates blocked schedules from markup language, or from class codes using scraped course data.

## Languages, Other

English (native), Korean (intermediate), Spanish (beginner), recorded sound for short film, Classical Chinese enthusiast