James Huang

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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

Graduated with high distinction 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, *nix

Experienced

Rust, Ruby, 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