

John He

<https://johnhe.xyz/>

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EDUCATION

University of California, Berkeley - College of Letters and Science

August 2020 - May 2023

Bachelor of Arts in Computer Science

GPA: 4.00/4.00

Generation Change Scholarship recipient

Relevant coursework: Structure and Interpretation of Computer Programs, Data Structures, Great Ideas of Computer Architecture (Machine Structures), Discrete Mathematics and Probability Theory, Designing Information Devices and Systems I, Designing Information Devices and Systems II

EXPERIENCE

Software Engineer (Full-Stack) at a startup company, www.doriot.com

July 2020 - Present

- One of the three main developers for [Fantasy Startup](#), a mobile application focused on educating about startup-investing through a series of simulated investments
- Created backend logic and UI for the "Learn" section of the app, which presents 150 informational lessons and timed quiz questions about startup-related terms to the user while tracking their progress
- Loaded startup data from spreadsheets into PostgreSQL database using Python's Pandas and Requests libraries
- Maintain a .NET API on the backend for user and investment logic by writing API endpoints for posting and fetching investments, in-game cash balances, user credentials, lessons and quizzes, game statistics, and more
- Built and styled most of the screens, modals, and cards within the application using React Native and CSS
- Implemented data storage within the user's device for conditional flows and information fetched from the API
- Practice Agile-like Development, using Jira to organize two-week sprints and periodic QA cycles

PROJECTS

Personal Website, <https://johnhe.xyz/>

August 2021

- Produced a personal portfolio website with Next.js to showcase me and my interests
- Designed a unique phone-like user interface to organize and display information in an engaging way
- Assembled pages with HTML elements, Next.js components, and CSS to recreate the design and behavior of popular applications such as Wikipedia, Spotify, and Netflix; incorporated music and embedded trailers

Dungeon Escape, [video demonstration](#)

April 2021

- Worked with a partner to create a two-dimensional dungeon exploration game in Java
- Randomly generated a landscape of rooms and hallways deterministically based on a seed entered by the user
- Spawned special interactive objects within the game that affect the player's health and vision when touched
- Arranged a menu for users to modify aspects of world generation such as environment, difficulty, and visuals
- Implemented a system for saving and loading the game by tracking every keystroke and writing to text files

Stock Bot, <https://github.com/heisjohn/stockbot>

2019 - 2020

- Developed a Discord bot in Python that generates a mock stock market where users buy and sell stocks with chat commands and receive real-time market alerts in a dedicated channel
- Used Matplotlib to automatically produce charts that included ticker symbols and hundreds of data points
- Interacted with the Discord API to detect commands and send images, stock prices, and personalized messages
- Stored and modified user, server, and stock data by reading and writing to files with the Python JSON library

SKILLS

- **Languages:** Advanced: Python, Java, Javascript, HTML, CSS. Proficient: C, C#, SQL.
- **Libraries:** React, Discord.py, LINQ, Numpy, Pandas, Requests, Matplotlib, PyAutoGUI
- **Frameworks:** React Native, Next.js, .NET Core
- **Version Control:** Git, Github, Bitbucket, Azure DevOps
- **Other Skills:** PostgreSQL, Jira, Agile development

ACHIEVEMENTS

- AAPT Physics Bowl 1st place in Illinois, Iowa, Nebraska, and Wisconsin (2019)
- National AP Scholar
- Perfect 36/36 score on the ACT