HUIJIA "EMILY" WU
SOFTWARE ENGINEER

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RECENT TOOLKIT   Ruby, Ruby on Rails, React, Redux, Javascript, Node.js, Python, jQuery, Express, PostgreSQL, MongoDB, Mongoose, Amazon Web Services (AWS), Heroku, Webpack, Git, HTML5, CSS3

PROJECTS

NekoBook (Ruby on Rails, React, Redux, PostgreSQL, HTML, AWS, and CSS)   **Live Site |Github**
A Facebook clone where users can make friends, edit profiles/photos, write posts/comments, and keep up with friends' activities.
- Developed an advanced PostgreSQL schema for allowing users to make outgoing friend requests (e.g., sending or cancelling), handle incoming friend requests(e.g., notifications, confirming/rejecting), and manage established friendships (e.g., unfriend)
- Leveraged React to create an intuitive user interface, including streamlined profile editing and post & comment creation/editing
- Utilized AWS S3, together with Rails ActiveRecord, to store and host user-uploaded images to customize their picture and cover photos on user profile pages
- Established customized front & back-end validation for user signup and implemented user authentication in Rails, supplemented by tooltip messages for invalid/empty entries help guide user inputs

Eight-Ball Pool Simulator (Javascript, HTML, and CSS)   **Live Site | Github**
A JavaScript project simulating the gameplay mechanics of an eight-ball pool game visualized using the Canvas HTML element.
- Designed and implemented custom scripts for handling game logic (e.g., user interaction with cue stick, changes in pool balls' velocities), using an Object-Oriented-Programming (OOP) approach to ensure separation of responsibilities (e.g., animation) across the game object, the pool table object, and pool ball objects
- Employed HTML5 Canvas for rendering the main features of the game, including the visualization of geometrical shapes and text for pool balls, table, game status, and cue stick and the repositioning of the cue stick when handling mouse move events
- Implemented collision detection for circles representing pool balls and a rudimentary physics engine simulating 2D ball motion to reflect conservation of energy, taking into account the nature of different hitbox shapes (e.g., collisions with other balls and table edges, speed reduction due to friction)

FishyDex (MongoDB, Express, React, Redux, Node.js, HTML, and CSS)   **Live Site | Github**
A full-stack single-page web application where users can add/view information about fish and fishing spots and track their catches.
- Collaborated in a four-man team to develop a full-stack social platform, focusing on backend implementation and providing flex support in frontend code review and debugging
- Utilized Express routing to create backend routes for handling create/read/upload/delete (CRUD) operations for storing different fish and fishing spot information, based on user input in frontend forms
- Set up linkage between MongoDB and Express backend routes to record user information, fish and fishing spots, and many-to-many relationships for fish and fishing spots

EXPERIENCE

McKinsey & Company, *Senior Business Analyst* New York, NY   2016-2019
- Worked on 10+ one- to three-month projects related to regulatory stress testing, compliance, and conduct risk mitigations for three large international financial institutions and multiple regional US banks
- Developed a detailed cross-functional risk assessment framework for a pharmaceutical client, allowing them to evaluate their portfolio of several thousand products
- Developed a comprehensive playbook for crisis management/preparation, leveraging interviews with 20+ industry experts

Boston Federal Reserve Bank, *Senior Research Analyst*   Boston, MA   2015-2016
- Conducted research into consumer payment preferences and behavior using individual-level survey data
- Utilized Stata to analyze the spending behavior of thousands of individuals and transactions
- Participated in the development of future surveys, identifying key questions for answer questions on payment preferences

EDUCATION

App Academy   New York, NY   2020
- Full-stack web development bootcamp with <3% acceptance rate (1,000+ hour curriculum covering Ruby on Rails, JavaScript, React, Redux, SQL, Advanced Algorithms, and Data Structures)

Harvard University   Cambridge, MA   2012-2015
- Master of Arts (MA): Economics
- Ph.D.: Economics - Incomplete

Princeton University   Princeton, NJ   2008-2012
- Bachelor of Arts (BA): Economics, *summa cum laude, Phi Beta Kappa*; GPA: 3.90/4.00
- Certificates (Minors): Finance, Applications of Computing (Applied Computer Science)
- Relevant Coursework: COS 126 General Computer Science (Java), COS 226 Algorithms and Data Structures (Java), COS 217 Introduction to Programming Systems (C), COS 323 Computing for the Physical and Social Sciences (C/C++, Java, Matlab)