Brian Kwok

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Software Engineer | New York, NY

Disclaimer: I am a Software engineer with a timeline as twisty as code in a spaghetti factory: bootcamp graduate, layoff detour, degree enthusiast, and unwavering code aficionado.

Skills

JavaScript, C++, React.js, Redux, HTML, CSS, MongoDB, PostgreSQL, Git, AWS, Microsoft Azure App Service, HTML, CSS, Googling, Debugging

Work Experience

Full Stack Engineer | *Wayfair - Boston, MA* Jun 2019 - Feb 2020

- Collaborated within the Identity team to enhance user account customization features.
- Collaborated with iOS and Android app developers to architect and implement a robust backend infrastructure, ensuring smooth data retrieval for engineers, ultimately accelerating development cycles by streamlining backend interactions.
- Pioneered seamless integration of WhatsApp messaging services, elevating user experience and fostering a 10% increase in timely notification interactions.
- Spearheaded the development of a robust PHP backend while leveraging GraphQL and React.js for frontend implementation, resulting in a 12% enhancement in application responsiveness.

Android Mobile App Development Intern | *Start English Now - New York, NY* Feb 2019 - May 2019

- Assisted in the development of an Android mobile app using Kotlin and MongoDB.
- Responded to database issues and implemented solutions to ensure smooth operation.
- Proactively identified and resolved complex database issues, showcasing an ability to troubleshoot efficiently and implement effective solutions, which led to a 15% reduction in app crashes and improved overall stability.
- Actively participated in code reviews and contributed to continuous improvements in coding practices, fostering a collaborative environment that resulted in faster feature deployment and increased team cohesion.

Ramp Safety Supervisor | *Korean Air - New York, NY* Oct 2013 - Dec 2017

- Demonstrated strong leadership skills by overseeing and coordinating ramp operations to ensure the safety and efficiency of aircraft ground handling.

Projects

Personal Finance Manager | *Node.js, Express, React.js, MongoDB, Azure Web Service* live site | frontend | backend
Personal Accountant - Utilize Plaid API to securely connect bank information to the personal finance app

- Developed a comprehensive personal finance full-stack web application utilizing Node.js, Express, MongoDB, and React with Redux.
- Integrated the Plaid API to securely connect users' bank information, enabling expense tracking and financial analysis.
- Hosted the Express server on Azure and deployed the React client on GitHub Pages for seamless user access.
- Chose secure cookies over JWT tokens for sessions, balancing stateless authentication with stronger security and data privacy. This streamlined user authentication, improved cross-device use, and reduced token vulnerabilities.

Neural Network from Scratch | *JavaScript, Canvas* live site | github
Handwritten Digit Recognition - built a neural network from the ground up using JavaScript and the Canvas API

- Developed a neural network entirely from scratch using JavaScript and the Canvas API, avoiding the use of external machine learning libraries.
- Implemented a custom algorithm to analyze digits drawn by users on an HTML canvas.
- Demonstrated a strong understanding of neural network architecture and training principles.
- Engineered a complete multi-layer perceptron (MLP) neural network, encompassing input, hidden, and output layers, showcasing adept network design skills.
- Employed meticulous backpropagation and gradient descent techniques to attain exceptional accuracy rates in handwritten digit recognition.

Tetris | *React.js, JavaScript, Canvas* **React.js**: live site | github | **Canvas**: live site | github
Simple game of Tetris - two version of games, one with React.js and the other with plain JavaScript and Canvas API

- Employed modular design and object-oriented programming to encapsulate game mechanics, UI elements, and animations in distinct classes. Resulted in a structured, reusable, and scalable codebase.

Maze Solver | *JavaScript, Canvas* live site | github
Maze generator and solver - Interactive maze solver using JavaScript and Canvas API

- Implemented breadth-first search (BFS), depth-first search (DFS), and A* algorithms for visualizing different pathfinding strategies. Regarding performance, the A* algorithm demonstrated superior results.
- Showcased strong algorithmic and problem-solving skills in designing efficient maze-solving methods.
- Employed modular design principles to create an interactive and educational platform that vividly illustrates how distinct algorithms navigate through mazes, combining technical excellence with user engagement for a comprehensive learning experience.

Education

CUNY Queens College - BA of Computer Science Spring 2023
CUNY Queensborough Community College - AS Liberal Science Fall 2021
App Academy - Highly selective web development program with 3% acceptance rate Summer 2018
St. John's University - Masters of Science in Pharmaceutical Sciences Fall 2013