

# Bo Peng NYU Computer Science | software engineer

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## Technical Skills

**Strong:** Node, Express, Javascript ES6+, React/Hooks, React Router, Webpack, Bcrypt, JWT, MongoDB, RESTful API, GraphQL, Authentication, Git Version Control, Vim IDE, VSCode, CLI, Bootstrap, Docker, HTML5/CSS3

**Experienced:** TDD, Jest, Enzyme, Supertest, Postgres, Websockets, Apollo, OAuth, Redux, AWS, Travis CI, Java, Python

## Experience

Nova

2019 - Present

- Combined React's dynamic rendering and D3 to generate a continuously animated interactive data-driven SVG representation of GraphQL schemas that are capable of persisting throughout the application life cycle
- Maintained aspect ratio of SVG schema nodes represented as a directed graph using an algorithm that branches the nodes outward along specific X coordinates on the canvas by using force to control the motion
- Architected custom React Hooks to eliminate the need for lifecycle methods and shifting the Class paradigm into a more organized functional architecture by isolating functionality into multiple reusable methods
- Implemented Redis cache to handle high volumes of incoming GraphQL endpoint fetch requests which minimizes the number of asynchronous calls resulting in reduced latency and a streamlined UX
- Deployed Node.js application as a multi-container docker application, isolating Node.js environment and Redis images, resulting in a modularized and standardized service infrastructure across all platforms
- Utilized session storage to store user's introspection query to persist sessions within the application view
- Implemented React Router to enable client-side dynamic routing which reduced server calls and produced seamless view transitions between multiple documentation pages across the application infrastructure
- Developed a breadth-first search algorithm to produce a specific color pattern based on the schema's correlation with one another to display a clear understanding and overall visual structure of the nodes
- Enforced unit testing with Jest's assertion and mocking library combined with Enzyme across the application infrastructure to ensure maintainability and clean code structure and to reduce production bug density
- Utilized AWS EC2 and S3 to store the dockerized app in the cloud for reliable elastic web-scaling and security

## Open Source Projects

Iterator | *Project Management tool*

2019

- Developed tool to enforce kanban scrum agile workflows aimed to provide an organized and structured development process by monitoring productivity and point systems between team members during a sprint
- Designed an Entity Relationship Diagram to construct multiple one-to-many database relationships between users, projects, and sprints in Postgres to achieve ACID compliance for guaranteed validity of transactions
- Inserted JWTs from Express stored in a HttpOnly cookie to act as a self-contained reusable digitally signed secret token to prevent being accessible from Javascript for possible XSS attacks and to persist authentication
- Utilized Supertest on Postgres endpoints in Express to ensure server-database interoperability and behavior

Webpack Starter | *NPM package CLI tool*

2018

- Harnessed Node and the NPM packaging ecosystem to create a extensible and modular CLI tool to abstract webpack complexities for easy configuration and setup on the user's behalf
- Leveraged Node Child Processes to execute parallel bash commands inside the shell to develop user-facing API and to write and generate files and folders that are necessary for Webpack within the client's local file system
- Implemented node environment variables to handle production and development modes inside scripts
- Assembled React Hot Loader as a webpack plugin to prevent re-rendering of the entire page view, which kept logs intact and maintained application state at runtime resulting in a better, faster development experience
- Utilized Babel NPM package to transpile ES6 syntax down to readable browser-compatible Javascript code

## Education

New York University | BA in Computer Science with a minor in Economics and Web Design

2014 - 2018

## Public Talks

Build With Code NYC | Memory Allocation

2019

## Interests

Digital Art | Rock Climbing | Ping Pong | Minimalistic Architecture | Home Decor | Palewave Fashion | Photography  
Matcha Latte | Hiking in HK and California | Driving at Night | Japanese Cuisine | R&B and Ballad Music