

# KEN ZHONG Software Engineer

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## EXPERIENCE

**SumZero**, New York, NY January 2018 – present  
*Software Engineer*

- Developed various features for SumZero as a full stack software engineer utilizing Ruby on Rails, JavaScript, React, MySQL, and GraphQL.
- Overhauled main search functionality with a multi-index Elasticsearch model, significantly improving both querying speed and result accuracy.
- Wrote backend unit tests with RSpec and Capybara and frontend tests with Jest, Enzyme, and Storybook, improving test coverage and application reliability.
- Converted Angular 1.x with RESTful AJAX components into React/Redux components with GraphQL queries and mutations, improving maintainability and ease of deployment of future features.

**TestMasters**, New York, NY 2016 – 2017  
*Instructor*

- Taught live in-person classes for students preparing for the LSAT exam, as well as provided private one-on-one tutoring, increasing student's test scores by up to 20 percentile points.

**Microsoft**, Washington, D.C. 2013 – 2014  
*U.S. Government Affairs, Public Policy Fellowship*

- Researched and drafted memoranda on regulatory and policy issues in privacy, cyber-security, government surveillance, and telecommunications in support of Microsoft's policy outreach.
- Created and maintained internal legislative tracker to monitor and analyze Congressional legislation on government surveillance programs and privacy reform.

## SKILLS

JavaScript / ES6.   Ruby   Rails   React / Redux   HTML5   CSS / SCSS   SQL  
GraphQL.   Elasticsearch   Node.js   Express   MongoDB   RSpec   Jest / Enzyme

## RECENT PROJECTS

**PlasmaForce** (live: [kenzhong.me/plasmaforce](http://kenzhong.me/plasmaforce)) – *JavaScript, HTML5 Canvas, Webpack, Babel*  
*A 2d sidescrolling space shooter game built with object-oriented programming principles.*

- Optimizes for performance by layering multiple canvas elements rendering at different refresh rates, caching sound effects and images, and cutting down  $O(n^2)$  collision detection operations, resulting in smooth 60 fps animation on relatively low-end computer hardware.

**Pictus Whiteboard** (live: [pictus-whiteboard.herokuapp.com](http://pictus-whiteboard.herokuapp.com)) – *JavaScript, Node, Express, MongoDB*  
*A full stack whiteboard app where users can create, share, and work on a canvas together in real-time.*

- Implements Websockets to update whiteboards in real time and to connect different users with a NodeJS/Express server.
- Stores user information and whiteboard state using a MongoDB NoSQL database.

## EDUCATION

**Columbia University, New York, NY**, *Juris Doctor*, May 2013  
Science and Technology Law Review, Lawyering in the Digital Age Clinic, Unemployment Action Center

**University of California, San Diego, CA**, *Bachelors in Economics, cum laude*, June 2010  
Honors: Phi Beta Kappa Honors Society, Provost's Honors List (2006-2010)