Hana Um

hanaum.com

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Work Experience

BioElectron Technology Corporation: Software Engineer — Sep 2016 - Current

- Designed and deployed multiple internal tools for scientists in order to modernize the scientific workflow.
- Orchestrated complete rewrite of frontend architecture using React, Redux, and Typescript. Modernized the build process using Webpack 3 and added support for proper development and production builds.
- Developed the necessary backend infrastructure and APIs for the internal applications using Python, Flask, PostgreSQL, and sqlalchemy.
- Lead the adoption of unit testing in the code base using Jest on the frontend and Python unittest on the backend.
- Interfaced with clients to gather requirements and incorporate feedback to streamline applications.
- Technologies: React, Redux, Typescript, Redux-Saga, React-Router, Jest, Python, Flask, sqlalchemy, PostgreSQL.

Kryptnostic Inc: Frontend Engineer — Jan 2016 - Jun 2016

- Built kryptnostic.com from ground up. Implemented design and created a responsive and functional client-facing site.
- Added new features to kodex.im, Kryptnostic's flagship secure communication platform, such as administrator panel controls, user listing, archived / muted chat channels, channel notifications, front-end support for paging, email verification, pasting browser and file system images, and multiple performance optimizations.
- Took charge of UI/UX design implementation of Kodex which included rewriting the login and registration pages, user settings options, and all of the email templates.
- Spearheaded the adaptation of automated testing in Kodex. Code coverage improved from 0 to 60% as a result of this effort.
- Deployed and released code to staging and production environments.
- Technologies: HTML5, CSS3, LESS, JavaScript, AngularJS, Gulp, Karma, Jasmine, Webpack.

Biomedical Engineering Department, Columbia University: Lab Technician — Jun 2011 - Oct 2014

- Developed a MATLAB program to quantify the scaled area of cells.
- Independently conducted research on fibroblast migration.
- Performed data analysis and statistics using SPSS.

Genetics Department, Columbia University: Lab Intern — Jun 2010 - Sep 2011

- Conducted research on gene manipulation of yeast cells.
- Independently discovered a significant gene (cwf14 Δ) linked to a chromatin mutation.

Skills

Languages: ES6, JavaScript, TypeScript, Python, Ruby
Frameworks: React.js, AngularJS, Angular2, Ruby on Rails
Libraries: Redux, Redux-Saga, React-Router, RxJS, Node.js, Socket.IO, jQuery
Style: HTML5, CSS3, LESS, React-Bootstrap, Twitter Bootstrap, Materialize
Databases: PostgreSQL, MySQL, MongoDB, Firebase
Testing Framework: Jest, Karma, Jasmine
Build System: Webpack, Gulp

Education

Columbia University - Barnard College — Sep 2009 - May 2013
B.A. Biological Sciences - Biomedical Engineering — GPA 3.3

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Public Projects

Kryptnostic Inc. Company Website   kryptnostic.com   **Frontend Engineer (2016)**

Implemented complete redesign of company website from the ground up.

- Technologies: JavaScript, LESS, Bootstrap, HTML5, CSS3, Webpack.

Kodex.im   **Frontend Engineer (2016)**

Kryptnostic's flagship chat application supporting homomorphic encryption.

- Designed and shipped new features including administrator panel, user directory, archived / muted chat channels, channel notifications, frontend support for message paging, email verification, pasting browser and file system images, and multiple performance optimizations.
- Implemented UI/UX design for login and registration pages, user settings options, and email templates.
- Technologies: AngularJS, JavaScript, LESS, Bootstrap, HTML5, CSS3, Webpack, Gulp, Karma, Jasmine.