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# Melvin Estrada

Software Engineer

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## Technical Skills

**Front-End:** JavaScript, ES6/7, HTML/CSS, ReactJS, Redux, AngularJS, Backbone.js, jQuery, Flow Router

**Back-End:** NodeJS/ExpressJS, Python, MongoDB/Mongoose, MySQL, PostgreSQL, Redis, REST

**Tools:** Underscore, Webpack, Jest/Enzyme, Mocha/Chai, Docker, Git, VBA, Matlab, AWS, Heroku, MeteorJS

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## Software Engineering Projects

**Werk Table** | [github.com/TeamW3rk/info](https://github.com/TeamW3rk/info) | [github.com/TeamW3rk/proxy-melvin](https://github.com/TeamW3rk/proxy-melvin)

Real-time online restaurant reservation application, designed the restaurant info's back-end to handle webscale traffic

- Optimized ExpressJS server to handle 10K requests per second on a MongoDB containing 10 million records
- Achieved a 40% web response time reduction by adding a Redis caching layer to the server
- Implemented a proxy server that carried out server-side rendering for Search Engine Optimization

**Welp** | [github.com/teamwelp/reviews](https://github.com/teamwelp/reviews) | [welp1.herokuapp.com](https://welp1.herokuapp.com) | [welp-reviews1.herokuapp.com](https://welp-reviews1.herokuapp.com)

Online business directory with user reviews and ratings, responsible for the reviews microservice

- Built server using ExpressJS and MongoDB that can handle search, sort and paging queries
- Utilized reusability of ReactJS components to generate repeating elements such as dropdowns, review/user entry and pagination
- Developed a proxy server that merged all microservices making them accessible via a single endpoint

**Wazzup!** | [github.com/melvinest/wazzup](https://github.com/melvinest/wazzup) | [wazzup1.herokuapp.com](https://wazzup1.herokuapp.com)

Real-time chat application built with MeteorJS

- Utilized MeteorJS full-stack reactivity to implement real-time chat feature
- Implemented client-side routing via Flow Router to differentiate various states of the application and to enable browser history and bookmarking

**Breakout React** | [github.com/melvinest/breakout-react](https://github.com/melvinest/breakout-react) | [breakout-react.herokuapp.com](https://breakout-react.herokuapp.com)

A breakout game powered by ReactJS

- Employed ReactJS lifecycle methods to handle game's collision detection, score counter and brick layout

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## Professional Experience

**Eichleay Inc | Engineer 1 | 2017**

- Designed pipe supports for a proposed 3000 ft firewater line replacement project

**Sunlink Corp | Structural Design Engineer | 2016-2017**

- Reduced the required engineering man-hours by 60% by developing Python scripts that automated the creation of structural models
- Refactored existing excel templates using VBA, improving template sizes and spreadsheet load times by 60%
- Improved capability of legacy Matlab design template by integrating a Python script that eliminated user inputs, streamlining the user experience
- Converted current Matlab-Python design template into a purely Python codebase resulting in a 30% calculation time improvement due to the elimination of scripts interfacing two different programming languages

**Fluor Corp | Associate Design Engineer 2 | 2014-2016**

- Automated 90% of the structural engineering templates with VBA, optimizing design delivery by 50%
- Designed steel pipe rack structures for an \$11B petrochemical project located in Louisiana

**Chiyoda Corp | Engineer 2 | 2012-2014**

- Designed various steel and concrete structures for a \$34B LNG project located in Darwin, Australia

**AMH Philippines Inc | Apprentice Engineer | 2012**

- Analyzed geotechnical conditions for a \$35B coal-fired power plant project

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## Education

**Hack Reactor**, Advanced Software Engineering Immersive Program  
**University of the Philippines**, B.S. Civil Engineering, Cum Laude

San Francisco, 2018  
Manila, 2011