

# James Hay

Engineering Manager, User Interface Developer, and Software Architect



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*As a strategical thinker, an excellent written and oral communicator, and an expert in web architecture, I am passionately driven to bridge the divide that often stands between a set of business goals, and their technical implementation. My pragmatic approach to meeting this goal, ensures that no single aspect should take priority by default, and that a holistic view of the overall market, industry or business, can determine which paths will lead to the maximum added value, for the minimum cost.*

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## Employment History

### Senior User Interface Manager at Oldendorff Carriers

February 2019 - Current

*My management responsibilities primarily covered both the user interface team and our front-end product, for the internal data science platform.*

- Founded the front-end team of the data science department, and evangelized user interface development to team members, department heads and other business stakeholders
- Proactively met with members of commercial teams to understand their problems and design capable software solutions
- Coordinated frequently with other engineering managers to present my architecture proposals and integrate their solutions into the front-end
- Ran the hiring and salary negotiation process for the additional team members of the front-end team
- Set timelines and work priorities for the team using Agile methodologies
- Set unique KPI's and other goals for each team member

### Engineering Manager at MyDoc

February 2018 - February 2019

*After being promoted to Engineering Manager at MyDoc, I was tasked with overseeing the entire cross-functional engineering team at all stages of product development. At the same time, I maintained my role as lead front-end developer (described below) and continued to work on the core platform architecture.*

- Coordinated with external clients, and internal stakeholders to present a unified development plan for desired features and functionality
- Developed complex technical specifications across multiple platforms, as a single source of truth for engineers and QA
- Ran regular sprint meetings with the team to organize deadlines, prioritize work items, and preemptively solve looming problems that could affect the release of product features
- Managed the QA team to ensure that our engineering approach was balanced between feature development, and maintenance
- Ran interviews for engineering candidates

## Lead Front-End Developer at MyDoc

June 2016 - February 2018

*Originally employed as a senior front-end developer, my role gradually expanded to include architecture of the whole platform.*

- Lead the complete rebuild of the patient and doctor front-end platforms in React with Redux
- Built from scratch, using the same technologies, an administration portal with role based features for internal staff, or third party clients
- Designed and implemented proper authentication mechanisms, using single-sign-on principles and role-based authentication
- Rewrote our legacy websocket chat server. Initially developed in Closure, I analyzed the existing code and built a new and improved chat service using Node.JS
- Worked closely with designers and product managers to ensure a consistent and elegant user interface
- Introduced code testing, static typing and build tools to the front-end

## Senior Front-End Developer at 90 Seconds

April 2015 - May 2016

*I was employed at 90 seconds as their first front-end developer, and led the development of the front-end during their rapid Series A growth.*

- Rebuilt the entire front-end from scratch
- Initially created a proprietary jQuery-based component framework to replace the ad-hoc javascript used throughout the earlier version of the application
- Worked on full-stack integration with Ruby, moving the team away from a pure Rails system, to a standard REST API approach
- Introduced the concept of websockets, and implemented the client-side of it for an in platform notification and simple chat system
- Introduced React to the platform initially for a "Quick project quote" feature, and later to the platform as a whole

## Front-end Developer at EziBuy

April 2014 - May 2015

*During my time at EziBuy, I worked almost exclusively on the company's new flagship omni-channel website, and built some minor internal applications.*

- Lead and completed front-end development of the EziBuy e-commerce website, taking over the role from multiple offshore front-end developers
- Developed a proprietary jQuery-based component framework to provide better code structure and reusability throughout the site
- Mentored and assisted other front-end developers (and sometimes back-end developers) within the team.
- Coordinated with large teams of offshore backend developers and business analysts to ensure smooth back-end/front-end interaction
- Created a database log viewer with Backbone.JS, early TypeScript, C#, and an MS-SQL database.

## Analyst Programmer at AdvanceRetail Technology

January 2013 - April 2014

*At AdvanceRetail I acted mostly back-end developer, working on the .Net stack, for a mature point-of-sale software solution used in New Zealand and Australia*

- Developed web based internal tools for the development team
- Built FTP windows services to pass batched retail transactions from client servers
- Developed a TCP socket program to receive remote commands at client servers under AdvanceRetail's control
- Assisted with migration from ActiveRecord to Entity Framework
- Assisted with the development of a custom clients master data management system
- Built adapter modules to parse and transform transaction data from third-party systems such as Magento to our own format

## Web Developer at Nouveaux Design

April 2010 - January 2013

*Nouveaux Design's primary client was the New Zealand regional arm of 20th Century Fox. I produced many microsites, competitions and internal web applications during my time there.*

- Worked
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## Notable Software Architecture

### Oldendorff Carriers

- Designed and built a custom set of React tooling around the Mapbox library, by directly manipulating the root Mapbox component with a combination of custom event emitters and React hooks. The solution matches the functionality of other open source libraries such as react-map-gl and react-mapbox-gl, but also provides pragmatic React-based access to a fine-grained level of interactive control that's required in our extensive use of GIS information
- Designed the architecture for a front-end heavy data investigation system within our platform named "QPD" (Query-Pivot-Dashboard). The "Query" part of the solution is visually analagous to a GUI SQL builder, but utilizes the functionality of the Javascript language to connect diverse data sources both in memory and via API endpoints. The resulting dataset of a query is then piped to a fully customizable pivot table. The expressive combinations of these data investigation technologies, can be utilized repeatedly, and placed into a dashboard, allowing end-users to create their own unique view of the world, for them or their team
- Implemented a generic filtering framework for deeply nested logic-based filtering of entities. It allows JavaScript filtering as well as dynamic SQL generation for back end filtering, and provides the ability to create custom resolution of individual filter nodes.