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Alex Youker - Staff Software Engineer

I am a full stack engineer with 9 years of experience delivering highly reliable and scalable applications to customers in mission critical roles. I am comfortable developing systems at all levels of the software stack, but my true passion is front end engineering in React/React Native.

Currently, I am working as the lead architect (Staff Software Engineer) on an "offline first" web application that is used by Emergency Medical Services teams across the United States to document the care of their patients.

What I enjoy most about my job is having the opportunity to create the tools necessary for others to fulfill the duties of their jobs in a way that is easy to use, and consistently reliable.

Skills

Front end:

- React
- ReactNative
- SASS
- Javascript (ES6)
- Redux
- Bulma CSS
- Bootstrap
- BackboneJS
- ...and many more

Back end:

- C#/.NET
- Java/Spring
- NodeJS/Express
- PHP/CakePHP

Databases:

- SQL Server
- MongoDB
- Oracle
- Postgres

Leadership:

- Driving technical direction
- Teaching/Mentoring junior developers
- Agile project management methodologies and sprint planning.
- Creating a culture of craftsmanship.

Employment

Stryker/Physio-Control Staff Software Engineer 2013 - Current

From October 2014 until now, I have been working on an offline capable, React JS based web app that is used by Emergency Medical Services teams to document their patient care in real-time. For the first two years, my manager and I were the only 2 developers on this project. So, I had the opportunity to oversee a great deal of the architectural decisions made within the system, as well as to help to train and onboard he rest of the team as we brought them on over time. Today the app has been scaled to serve all of our EMS customers in the field, including Fire/EMS teams for some of the largest metro areas in the country.

Technologies used:

- React (we started on version 0.11 and have since upgraded to 16.10)
- Java/Spring
- MongoDB
- SQL Server
- Oracle
- Express
- SASS
- CefSharp
- React Native

Accomplishments:

- Designed and implemented much of the base layout and form controls components that are used in the app today.
- Helped to create a CQRS based system similar to what someone might use PouchDB for today. High reliability and data integrity is of paramount importance to our customers so choosing the right architecture was incredibly important. This system allow for syncing user generated changes to the server to obtain eventual consistency with the server in a usage context where internet connections are constantly ranging from spotty to non-existent.
- Worked on a system to store large amounts of user data (potentially HIPAA protected information) in a secure way in IndexedDB.
- Implemented a Patient Matching system to allow data to be imported in to a form if the patient has already used the ambulance service in the past.
- Implemented a system to allow the user to fax a report containing all of the information they have documented about a patient from the app so it can be sent to the destination hospital.
- Worked on other systems and applications to further integrate our users with their most common destination hospitals.
- Implemented a system to allow agencies to create fields, groups and sections of various form controls and append them to our standard form. These fields are highly configurable and may include custom validations and behaviors based on user input. This feature helped us to solidifying a number of large contracts this past year.
- Integrated our system with a real-time patient tracking system for an extremely large metro area customer in the past year.

From the beginning of my tenure until October 2014, I worked on an offline capable mobile web app that allowed home health care nurses to document home health visits.

Technologies Used:

- BackboneJS
- jQuery
- LESS
- ASP.NET MVC 3
- SQL Server

Accomplishments:

- Wrote code to efficiently store large sets of reference data (ICD-10 codes and medication lists) in IndexedDB to allow offline use of the application. At the time, device hardware in a BYOD user base could be extremely poor which made this a fairly complex task.
- Created many of the base form and layout controls in the application, which are still used today.
- Created a system to allow configurable, input driven 'behaviors' and validations for various nursing forms. This allowed us to help meet customer / perspective customer demands while still adhering to OASIS standards.
- Added patient chart/history functionality to the application along with the ability to import patient information form their chart in to a nursing form.
- Adapted the design of the application to be fully responsive and support the use of smart phones by nurses in the field.

Allete — Programmer/Analyst — 2011 - 2013

I worked as a Programmer/Analyst at Allete where I was a member of the SCADA System Support team from 2011-2013. The team was responsible for the technology and software needed to monitor and operate the energy grid.

Technologies used:

- Java
- jQuery
- Oracle PL/SQL
- Some ASP.NET

Accomplishments:

- Worked on a real-time web interface to monitor events from RTUs and other SCADA system devices used to render a Data Acquisition and Control log.
- Maintained project to monitor and assess historical backups of critical cyber assets maintained by the EMS group using Netbackup.
- Involved in building/deploying system images, documentation, vetting, and de-activation/disposal of previously used machines during a major upgrade of the GE SCADA system used by the team.

Education

University of Wisconsin - Superior **2009 - 2013**

- Received B.S. in Math and Computer Science with a focus in Software Engineering
- Swenson foundation scholar from 2009 - 2013