Etienne Pageau

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Employment

Oproma Inc.

Software Architect / Senior Developer / Product Development Team Leader

April 2012 – Present

Concentration on full stack development: server, client, and mobile. Requirements elicitation. Application, UX, and UI design. Hands-on experience with all aspect of the product lifecycle including but not limited to designing, implementing, testing and deploying a scalable enterprise-grade headless CMS with web, desktop and mobile clients (see annex 1). Scrum was used to manage tasks and resources, including the use of a Kanban board, sprint boundary reviews and daily stand-ups. Mobile development targeting iOS and Android using Apache Cordova and React-Native. Desktop applications built using Electron, Java's swing toolkit, JavaFX and WinForms. Extensive experience with all layers of web application development. Client-side programming involving an extensive list of client-side libraries and frameworks, CSS pre-processors such as SCSS and less, single-page application and ASP.net web forms-based applications. Server side development in Java deployed to tomcat, .Net deployed to IIS and JavaScript deployed to Node.js. Integration with enterprise-search platform, traditional RDBMS both via ORM and traditional methods such as JDBC and multiple NoSQL providers. Designed and implemented an OAuth 2.0 provider, integrated it to an existing resource server and created multiple client integrations. Performed usability testing and analyzed recorded user sessions to improve user-facing products. Wrote unit tests to improve the reliability of software builds. Introduced code linting for better code consistency. Built a basic neural network-based text classifier and integrations with third-party image recognition libraries. Bring about continuous integration via Jenkins CI integrated to Gitlab based git code repositories, including automated documentation generation from internal wikis. Contact with mercurial et SourceSafe code repositories. Familiarity with the Docker container platform and traditional virtualization platforms. Use of an extensive array of work-related software such as Office suite, image manipulation software, VPN servers/clients, email servers, domain management, administration of most server platforms and several cloud vendors.

Statistics Canada

Desktop Support Specialist

May 2010 – August 2010

User mass-migration from Windows XP to Windows Vista.

Collège La Cité

Technician

February 2010 – April 2010

On-site technical support. Troubleshooting, software setup, and user assistance.

Education

Collège La Cité

Ontario College Advanced Diploma

September 2009 – April 2012

Technologies du Génie Informatique

Annex 1: How to Write Software to Outlive Its Creator

Oproma has a very long history with file sharing and collaboration platforms. For this reason, when the time came to reimagine one of our core offerings, many considerations were put into future-proofing the platform, the API and the clients. The goal of this piece is to provide some insights into these considerations.

Being an agile company, the extensibility of the platform is a priority at Oproma. For this reason, we have chosen a heavily modularized architecture for each of the platform's layers: server, web, and mobile; the intent being that any module can be altered or replaced independently.

On the server-side, this manifests itself as clearly defined interfaces that will abstract all operations to be performed on data, whether it be simply storing, indexing, or analyzing this data. A prime example of this is the concept of metadata extractors. In their simplest form, metadata extractors are passed binary data and return a collection of metadata about said data, to be displayed to the end user. Elaborating on the concept, Oproma has also developed extractors with built-in caching for improved performance and, more interestingly, extractors with integrated AI-based image recognition.

A similar approach is taken with our binary data stores, except these are defined as layers within a full data store stack. In its most basic expression, a data store stack will be configured to read and write binary data to a back-end store, whether a locally mounted file system or an object storage service provider out in the universe. Expanding from there, additional layers may be added, according to the various requirements of the specific deployment i.e. an AES-256 encryption layer or a compression layer to save on storage space at the cost of retrieval, etc.

The amalgamation of these ideas results in a server-side API that, with minimal effort from a backend developer, can be deployed in front of any service or back-end provider. This enables front-end developers to write complex, ACL intensive, web applications without having to worry about implementing these themselves while also allowing them to write their code once and be able to deploy it anywhere. Think along the lines of the JVM or hybrid mobile applications but for HTTP APIs. Very little to no prerequisite knowledge of back-end systems is required for front-end developers as integrations are done via standard protocols such as OAuth 2.0.

In the front-end world, the modularity manifests itself in the form of AMD (asynchronous module definitions). Permitting, among other things, a simple and easy way to define and create new folder views; allowing users to consume their data in the way most convenient to them. Furthermore, this modularization allows the application to load modules only as needed. This provides an increased responsiveness, resulting in an improved experience for end users. Another strong advantage of modularized client-side code is the ability to re-use these modules. This was also an advantage for our mobile applications. In this case, after careful evaluation of the options available to us, we embraced Apache Cordova since it meets our current needs in terms of features and performance while also allowing re-use of many of our web modules and styling.

The combination of these platform layers, mixed with intricate physical and environmental security restrictions, results in our most advanced secure file sharing platform ever.