SUHAIL ABOOD

LEAD SOFTWARE ENGINEER | GITHUB.COM/SUHDEV

OBJECTIVE

My passion is to write code that is reusable, testable, and maintainable. I always walk the extra mile to ensure deadlines are met, quality is as high as it can be, and best practices are followed. I'm always open to learn from others and even more open to share knowledge/ expertise with others. I'm also technology agnostic, and always looking for new challenges.
Note: Everything listed in the technologies is something that I've worked with commercially for at least 12 months.

TECHNOLOGIES

These are the technologies that I've been using commercially for the past 5 years. Please do ask to if you need to know more of how these technologies were used. TypeScript (5+ years), React (5+ years), JavaScript (7+ years), GraphQL (1+ years), Mobx (3+ years), Redux (4+ years), NodeJS (5+ years), Go (3+ years),

EXPERIENCE

LEAD FULL-STACK DEVELOPER • VERVE SEARCH • FEB 2019 – PRESENT

- I was initially brought to lead the front-end development of a desktop application (product) that Verve Search is launching this year. Throughout February, I was able to finish about 90% of the front-end development and I was asked to support the development of the backend (which is built using golang). The front-end is built using TypeScript, React on top of Electron, and communicates with the backend through **grpc** (protobuf).
- Jest (ts-jest) is used for unit-testing, and jest/puppeteer were used for e2e tests.
- The application, though desktop-oriented, was built to support mobile, tablet, and large screens.
- Interface-driven, in order to build a solution that is decoupled, the code followed engineering practices such that components rely on abstractions rather than concrete implementation. This allowed the application to easily support both Electron and browsers environments (which is a future requirement for Verve Search to release the application as a SaS solution).
- Built a plugin system that integrates with the core of the application to allow third-party vendors to write plugins for the application. Though this is not a requirement, however, it gives the application flexibility to treat functionality (even core functionality) as plugins that hooks into the life-cycle methods of the application to extend functionality.
- Train the in-house developer to upskill on certain technologies and engineering practices, React, TypeScript, TDD, design patterns, and large-scale app architecture.
- Built a GraphQL layer on top of PostgreSQL (the database of use) to expose data.
- Joined the backend development (which is built using golang), this includes refactoring the core engine of the backend to be more resilient, fault-tolerant, and to ensure behavior is more


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SharePoint Online (2+ years), Azure (1 year), Azure Service Bus (1 year), SQL, MongoDB, Docker (1+ years), Java (1+ years), D3 (4+ years), ASP.net MVC (2+ years), Elastic Search (1+ years), Sass (6+ years).

SOFTWARE ENGINEERING SKILLS

Object-oriented programming OOP, test-driven development TDD, multi-threading and concurrent applications (Golang), and multi-threaded NodeJS applications), and SOLID practices.

BUILD TOOLS

Fuse-box, webpack, TypeScript compiler (for NodeJS applications), gulp.

deterministic. Moreover, I supported the integration of the backend with the front-end using grpc and protocol buffers.

LEAD TECHNICAL DEVELOPER • SYSDOC • DEC 2016 – JAN 2019

- Leading the development process of some of the most critical solutions to some of the biggest brands out there including: Jaguar Land Rover, Vodafone, JCDecaux and Relx Group. This includes requirements gathering, solution architecture design and implementation, testing and deployment. [See a list of some of the projects below]
- Leading a team of two inhouse developers and (2-4) contractors.
- Writing and maintaining Sysdoc's code conventions and best practices. This is an initiative I started to ensure code quality meets a certain level, and that everyone in the team is on the same page, which in turn helped in better utilizing team members (as we're all started talking the same language).
- Building automation tools to improve the team productivity: (1) SharePoint Site provisioning command line tool (NodeJS package), (2) gulp plugin (gulp-sp-upload) to support SharePoint development on non-windows machines, and (3) an internal prototyping system to help get immediate feedback from designers on UI implementation (utilizes Google's Firebase and socket.io for storage and real-time communication), and ExpressJS for back-end and React/TypeScript for front-end.
- Training sessions for colleagues and clients' inhouse teams to upskill on **React, TypeScript, OOP, NodeJS, C#, TDD, and software engineering practices**.
- JLR Way **(12 months project)**: a custom-built fully-localized (13 languages) content management system built on top of SharePoint Online. (40K users, across 91 countries. The solution is comprised of four parts:
    1. Browser/client applications: due to the complexity of the solution, the browser application was split into modules (SPAs) that are loaded based on the page the user is on. These include, (1) Customisable home-page, (2) Custom-

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built content editing app, (3) user content management dashboard, (4) operational administrators dashboard. Technologies: **TypeScript, React, Mobx, IndexedDB (Dexie), Fuse-box/Webpack, Sass**. **Jest was used for unit-testing**. The solution supports all modern browsers + IE11, and utilizes a whole lot of techniques to improve performance including smart client caching (using IndexedDB – Dexie wrapper), and localStorage, websockets for real-time collaboration and updates.

2. **NodeJS Applications:** the solution includes 3 NodeJS applications, (1) permission management server (generic system that accepts a set of rules using JSON format) that allows to manage item-level unique permissions on SharePoint lists. (2) A custom-built real-time collaboration framework, that we use to support collaborative editing on the client applications. (3) GraphQL API server, runs behind Azure authentication, and uses GraphQL to structurally query content stored in SharePoint as well the SQL database. Technologies: **TypeScript, NodeJS, ExpressJS, Sequelize, GraphQL, Socket.io, RxJS.**
3. **ASP.net MVC applications:** two applications written in C#, one of which runs behind Azure authentication layer (i.e. by passing user identity from SharePoint), the application exposes RESTful API end-points that allows browser/client applications to query A SQL database that mirrors data stored in a SharePoint site collection. This allowed us to work-around a lot of the shortcomings of SharePoint, including the 5K threshold issue, and support much more powerful queries (using a custom-built JSON to SQL compiler). Technologies: **C#, EF (used only for migrations), SQL Server, OfficePnPDev, SharePoint CSOM, Azure Service Bus, Azure App Service, Azure Authentication, Azure AD**.

REFERENCES

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4. **Azure web job**: this is a C# application that is responsible for listening for events on Azure Service Bus queue, and action them accordingly. The application is built as a generic framework where modules can be added to it to handle specific events in the application. Technologies: **C#, Azure, Azure Service Bus.**

- **Vodafone Gifts and Conflicts registers:** a solution to help Vodafone users to automate the process of declare and track gifts/hospitalities and conflict of interests records. Technologies: **TypeScript, React, SharePoint 2016, SharePoint REST API (PNP), Sass, webpack.**
- **JLR Intranet**: Intranet solution that includes the following client applications:
  1. News portal
  2. Location/site portals
  3. Department/functional area portals

  The solution is built using **TypeScript, React, Sass, SharePoint Online, SharePoint REST API (PnP), PnP Powershell, FuseBox/Webpack.**
- **A game analytics system:** an analytics system to support a game that was developed by Sysdoc's game developer. The game is used to support a training programme. The analytics system is used to track user engagement, user events, and effectiveness of the training programme. The analysic system provided stakeholders with a mean to interrogate/access the aggregated data (collected from users who played the game) in both tabular and graphical forms. Technologies: ASP.net Core 2.2, Azure AD, Azure Authentication (SAML authentication), Azure SQL Database, TypeScript, React, D3 (for charts), webpack.

SENIOR SOFTWARE DEVELOPER • VERVE SEARCH • JAN 2014 – DEC 2016

- Leading a team of two developers to deliver high quality digital marketing campaigns for some of the big brands in the UK and the world, including Expedia, Gocompare, miinto.dk.

- Building tools to support the business of the company, including: Link Score tool, Lava (search engine with sentiment analysis, more about it below), scalable distributed web crawler in Golang (which was used to collect data from websites to support some of digital marketing campaigns).
- Holding training sessions for colleagues on OOP, TDD, React, TypeScript, and best practices.
- Liaising with clients' IT teams to deploy campaigns on their servers, and in some cases configuring those servers (Linux).
- Delivering high quality marketing campaigns this includes: implementation, testing and deployment. [full list is available on my LinkedIn account with links to those campaigns].
- Lava (the social search engine): this was an idea that the CEO of the company came up with to build a search engine that can show you the sentiment around specific phrases, in order to build, I had to implement the following:
  1. Scalable distributed crawler, we needed to crawl millions of pages from big publication and news websites including BBC.co.uk, theguardian.com, nytimes.com, independent.co.uk, etc. Utilizing Golang's concurrency capabilities and go routines (with their small memory footprints), I was able to build a crawler that can run on multiple machines (VMs on Google Compute Engine) within the same network to crawl multiple websites at the same time. The crawler then parses the HTML extracting content and submitting it to an Elastic Search cluster running on Google Cloud Platform.
  2. Client application using TypeScript, React.
  3. Flask application (backend – Python): that exposes end-points for the client application to query the elastic search cluster.

SOFTWARE DEVELOPER • VERVE SEARCH • FEB 2013 – DEC 2013

- I joined Verve Search as part-time developer while doing my masters. During this time, I was the only developer. and I was responsible for the development of all digital campaigns as well as internal tooling. Please see full list on LinkedIn.

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- I was also doing technical SEO for Verve Search. This included technical analysis of clients' websites for SEO recommendations.

OPEN SOURCE CONTRIBUTIONS

Please visit my github account on https://github.com/suhdev/.

EDUCATION

MSC IN INFORMATION SYSTEMS AND ROBOTICS • 2013 • KINGSTON UNIVERSITY LONDON
As part of an EU-funded project, I was offered a scholarship to do my masters. The project was to build a robotic system to help children with Diabetes to better manage and adhere to treatment plans.

BSC IN COMPUTER ENGINEERING • 2012 • UNIVERSITY OF JORDAN
This is an engineering degree which focuses on both software engineering as well as computer hardware and electrical circuits.
GPA 3.24

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