DAVID GAO



SKILLS

Programming Languages Go, Java, Python, Perl, Bash **Frontend Frameworks/Libraries** React, Vue.js, Node.js, Angular

Databases MongoDB, Aerospike, InfluxDB, MySQL, PostgreSQL, Oracle

DevOps Docker, Kubernetes, Terraform, Ansible, TICK Stack

WORK EXPERIENCE

Full Stack Engineer | Paymentus Corp.

November 2020 – Present

- Constructed a React webpage, from scratch, to display hundreds of rows of invoice data, in a report format, for an multi-million-dollar onboarding agreement
- Composed Node.js jobs for a variety of tasks including ingesting files from external SFTP servers, aggregating and manipulating data in MongoDB, and producing user friendly reports for clients
- Set up **Kafka** producers and consumers to link together Node.js jobs as well as produce and consume telemetry for existing applications
- Created Terraform plans to automate Kubernetes pod generation when cron jobs should be scheduled
- Refactored legacy React components to be generic and AODA compliant for improved reusability, scalability and performance optimization

Software Engineer | Index Exchange Inc.

May 2019 – November 2020

- Redesigned a legacy UI, that displays hundreds of thousands of complex data structures, to improve scalability and the user experience using Angular 6 on the front-end, and Node.js for the RESTful APIs
- Lead a team to create a go service, using **gRPC** and taking advantage of **Aerospike**'s cross data replication capabilities, enriching all streams of data resulting in higher value bids
- Developed a caching project to store a service's response to be looked up on subsequent requests containing the same cookie details, saving network calls and computational latency
- Implemented and negotiated a solution, with a third-party user identification provider, to encrypt their cookies using RSA-OAEP and have the data decrypted in real time with a **Golang** service
- Cohesively worked within a small group to develop an address book application in VueJS and create a detailed report for all of engineering to discuss the benefits and flaws of the language; in the research for new front end technologies
- Demonstrated initiative after completing the VueJS research ahead of schedule, by aiding the React research team with their investigation, and was awarded with public recognition in front of the Engineering department
- Won second place in Hackathon by tweaking existing services to display PSAs on unsold ad spaces
- Introduced the rotational "Operational Excellence" role companywide so engineers are always mindful of monitoring and alerting when developing features

- Meticulously developed and maintained automation code, using Protractor in Node.js, for tablet and desktop view of websites
- Created Python scripts to automate repetitive daily tasks, such as building Docker images, deploying code and starting applications, so that working hours are efficient and productive
- Exhaustively investigated newly developed Python applications and **SQL** scripts to ensure accuracy, quality and a conflict free transition from the development stage through to production
- Creatively developed a new graphical dashboard in **AngularJS** to display the current status of the company on multiple television displays for a Hackathon project
- Awarded a position on the Engineering Department's Exceptional Employee Confluence page for achieving work that is considered "Golden Standards"

PROJECTS

IXAccomplishments

March 2018 - April 2018

- Sole developer of the **React** web application to give and receive recognitions on a day to day basis
- Utilized Bootstrap, and SASS to implement a responsive design used for TVs, desktops and mobile
- Dockerized the application to lay the foundation for continuous integration and continuous delivery
- Backend, written in Node.js, retrieves user profiles, acknowledgments and rewards from MongoDB

TaskUp

November 2014 – May 2015

- Co-developed an android application, "TaskUp", in **Java**, allowing communities to upload tasks in order to increase volunteer opportunities and hours in the neighborhood
- App received over 100 downloads and 20 reviews a month after launch on the Google Play Store

EDUCATION

University of Toronto

• Honours Bachelor of Science - Software Engineering Stream

AWARDS

- After communicating my remarkable learning experience at Index Exchange, Natural Sciences and Engineering Research Council of Canada presented the Experience Award to me for a fine essay in researching new software development technologies
- Awarded the SCI Group Inc. National Student Paper Award for an exemplary paper appertaining to a chosen career, and setting the right goals to achieve the desired career