

David Kenyi

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TECHNICAL SKILLS

C++, C, Python, JavaScript, React, Express, NodeJS, HTML, PHP, Pug, CSS, Ruby, Java, MongoDB, Mongoose, SQL, SQL Alchemy, Postgres, SAS, R, MATLAB, SPSS, Microsoft Access, Jira, Confluence, Kafka, Kubernetes, NodeRED, Nginx, TypeScript, Vite, Pytest, Selenium

PROFESSIONAL EXPERIENCE

Full Stack Software Developer

June 2022 – June 2024

Skytrac Systems Ltd, Ottawa, ON, Canada

- Collaborated with the team to design new gateway integrations into the existing product
- Worked in agile environment by creating projects in Jira and maintaining its documentation in Confluence in compliance with the company policies
- Developed backend applications in Python and containerized them using Docker in a Linux Operating System
- Utilized technologies like Kafka, socket and MQTT to transmit and/or stream flight following data
- Built RESTful APIs, which were configured as webhooks at the data source, to utilized Kafka clients like Kafka Producer and Admin to publish data and manage the cluster
- Built REST API to serve Skytrac customers with Automated Flight Following (AFF) data from PostgreSQL database in both JSON and XML formats
- Added new and/or modified features in the GUI which utilized PHP and JavaScript through HTTPS calls to the REST API
- Implemented unit and integration tests for the REST APIs and the GUI using Pytest and Seleniumbase frameworks respectively
- Established cross-technology integrations by transmitting between Kafka and MQTT clusters through NodeRED
- Developed applications to stream Iridium Short Burst Data (SBD) in its original binary format from an IP socket or email through Kafka and decoded it into useful JSON data that was further processed and shown in map for end user consumption
- Created and maintained GitLab repositories for each project
- Managed repository configurations for all projects my team was responsible for
- Designed GitLab CI/CD pipelines to build docker images and push them to AWS Elastic Container Registry (ECR). The same images were also pushed to GitLab container registry
- Created and maintained remote GitLab runners with docker installed to execute pipelines that build and push docker images to the desired registries

- Created Kubernetes deployment files to deploy docker images in a Kubernetes cluster
- Configured Kubernetes cluster to allow appropriate volume and/or configMap to the docker images deployed in the Kubernetes cluster as pods
- Created AWS Elastic Load Balancers (ELB) in Kubernetes as services
- Configured Nginx with the ELBs to allow appropriate HTTPS calls to the REST APIs
- Troubleshooted applications deployed in Kubernetes to identify causalities and designed permanent solutions

Modeling and Simulation (M&S) Computer Laboratory Assistant Sept 2021 – Dec 2021

Department of National Defence (DND) and Royal Canadian Air Force (RCAF), Ottawa, ON

- Assessed requirements needed to incorporate VR/MR into the next generation of high-fidelity fighter jet simulators
- Developed a fighter jet flight simulation training for the RCAF pilots using MAK Technologies VR-Forces software
- Used VR-Engage software to run the simulation

Junior Software Developer June 2020 – April 2021

Bell Canada, Ottawa, ON

- Developed automation test cases on Android automation platform using Ruby
- Familiarized with Fibe TV app and its variants on iOS and Android platforms
- Documented and reported automation test results and problems identified by the automated test harnesses
- Interacted and collaborated with automation platform vendors, to report problems and suggest improvements

ACADEMIC EXPERIENCE

C++ Development

- Took part in a team of four to design and implement a simulation of DENAS-PCM device
- Used Qt Creator GUI application for our user interface development
- Implemented command-line interaction simulation game
- Designed UML diagram for the game to organize game characters and functionality
- Developed with C++ and Atom
- Simulated cell phone network connection to nearby cell towers within the boundaries of a city

Full Stack MERN Project

- Used MongoDB Atlas for database storage and mongoose for database design

- Built Node JS and Express RESTful API to handle the back end and database management
- Built client side using React JS and styled the user interface using SASS
- NodeJS libraries employed include express session to handle user sessions, JavaScript web token (jwt) for authentication tokens multer for file upload, bcryptJS for password encryption and fs for file management
- React libraries include axios for sending requests to the server endpoints, csv-reader for reading comma separate value (CSV) files, react-icons for rendering icons through the application, react-router-dom to manage various client routes, and form-data for sending information along with a file to the server

Web Development

- Designed and implemented trivia game web app
- Used NodeJS to develop an Express server to handle the backend
- Designed to and implemented RESTful API
- Used JavaScript, HTML, Pug, CSS, and Visual Studio Code to implement the user interface on the frontend
- Used sockets to enable real-time communication between players
- Used MongoDB to manage the app's database

Personal NodeJS Projects

- Designed and implemented a personal website
- Used ReactJS, HTML, and SASS to implement the frontend
- Learnt ReactJS by creating a frontend single page web page of cocktails
- Designed and implemented a bookstore web page
- Used Postgres to manage the database
- Used JavaScript and Express server to develop the backend
- Used HTML to develop UI on the frontend
- Developed with Visual Studio Code

EDUCATION

Bachelors of Computer Science

Graduated June 2022

Carleton University, Ottawa, ON

- BSc. Honours Software Engineering Stream
- Cooperative Program – completed 16 work terms

Bachelors of Mathematics and Statistics

Graduated June 2018

Carleton University, Ottawa, ON

- B. Math Honours Statistics with Concentration in Actuarial Science