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KARAN PATEL

4A Computer Science | HCI specialization

WORK EXPERIENCE

Software Developer | GroupBy Inc. (Sept-Dec 2018)

- Created reusable and scalable web components and features for a *React* based frontend in *TypeScript* and used *Redux* for state management. Used *Redux Form* to create new form components and hooked them up with the main form.
- Wrote automated *Unit* and *Integration* tests using tools like *Jest, Enzyme*, and *Chai*.
 Also did *Code Review* to understand new and legacy code patterns.
- Proactively participated in *design refinement* meetings with the *Product Designer* and the developers to understand and guide design decisions for scalable code.

Software Developer | Cambridge Global Payments (Jan-Apr 2018)

- Was an integral part of the *Agile Scrum* team working on the frontend aspects of the main web application using *React* and *Redux*, as well as with *SQL databases*.
- Investigated and fixed multiple bugs, developed deliverable features, and created white-box *Unit Tests*.
- Helped the QA team with *Regression and Performance testing*, increasing the team's work productivity by about **150%**.

Product Support Intern | Cambridge Global Payments (May-Aug 2017)

- Developed various scripts using **VBA on Excel** for database management as well as came up with a random person generation script on a short notice.
- Did an explicit *Exploratory QA Testing* for the company's new web application.
- **Researched** and compared various APIs, Blockchain, and MFA technologies as well as various JavaScript based frontend and backend third party applications.

PROJECTS

Color Chat Room | JavaScript, NodeJS, WebSocket, HTML, CSS, JSON

- Developed a live client-server web chat application in an attempt to learn how NodeJS and WebSockets work.
- The server assigns a unique color to every new user and sends them the chat history.

JavaSketch | Java, Swing, AWT, Gradle

- A Java application similar to Microsoft paint to draw shapes with changeable features.
- Using bottom-up Painter's algorithm, implemented features to move and delete shapes and save the canvas. Movement of shapes was done using graphic transformation.

Fotag Mobile | Java, Android Studio, Gradle

- Developed an Android photo album app in an attempt to learn Android development.
- The user can download stock images asynchronously, rate them and filter them according to the ratings. It supports different screen orientations and full screen image.

Mr Smithers (WIP) | Dialogflow (Api.AI), NodeJS, Express, JavaScript

- Developing an AI Messenger chatbot, using Natural Language Processing from Api.AI.
- Once finished, it will act as a personal assistant helping users with reminders, checklists, weather, maps, etc.

SKILLS

Languages:

C, C++, Java, Python, HTML, CSS, Bash, JavaScript, TypeScript, Scheme, MIPS

Frameworks and Tools:

React, Redux, Bootstrap, Material UI, Git, JIRA, Android Studio, Gradle, Yarn

Basic Knowledge:

Redux Form, NodeJS, WebSocket, R, SQL, Dialogflow (Api.AI)

Strong understanding of OOP concepts, Design Patterns, UML diagrams, MVC architecture, Data Structures, Algorithms.

RELEVANT COURSES

- Human Computer Interaction
- User Interfaces
- Software Design and Architectures
- Computer Security and Privacy
- Computer Networks
- Operating Systems
- Algorithms
- Numerical Computation
- Object Oriented Software Development
- Data Structures and Data Management
- Logic and Computation

INTERESTS

- Cooking, photography, sketching, music
- Human Computer Interaction and Artificial Intelligence
- Learning about new coding languages, technologies, and concepts

EDUCATION

University of Waterloo

 Candidate for Bachelor of Computer Science | 2015 – 2020