Sruthi Reddy Rekula

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About

UI developer with experience in React. Skilled at creating responsive web applications. Additionally, I am passionate about deep learning and its applications to the field of natural language processing and computer vision.

Summary

- **Around 7+ years of experience in designing and developing User Interfaces (UI), testing, and debugging applications.**
- Developed programming skills in designing and implementation of multi-tier applications using web-based technologies like **JavaScript/ES6** and **Spring boot.**
- Excellent Knowledge on Spring core such as **Dependency Injection, Annotations** and XML based Configurations.
- Hands on experience working with **Spring JDBC, Spring Hibernate ORM** and **JPA.**
- Proficient at designing dynamic web applications using **HTML5, CSS3, JavaScript, AJAX, JSON** with responsive web applications using **Bootstrap.**
- Hands-on experience in developing reusable components using **React.**
- Proficient in developing **Restful web services API** with best practices.
- Strong experience using **MAVEN** build system.
- Good Experience in database technologies such as **MySQL** and **Oracle**
- Developed unit test cases using **TestNG** for API testing.
- Using **Selenium** built out a unit testing infrastructure for a client web application that reduced the number of bugs reported by the client.
- Efficient working in **CI/CD** environment such as **Bamboo** and **GIT.**
- Experienced in working in **AGILE** based development environment and participating in Scrum sessions, Sprint planning using **JIRA**, Business requirement gathering sessions.
- Experience in working in cross functional teams and capable of performing in a fast paced, result driven atmosphere and have ability to learn and adapt quickly to the emerging new technologies.

Education

Master's in Computer Science (May 2015)   **Illinois Institute of Technology**
Bachelor of Technology, Computer Science (May 2013)   **Jawaharlal Nehru Technological University**

Technical Skills

Languages: Java/J2EE, JavaScript, TypeScript, SQL, Python, PyTorch, TensorFlow
Technologies: REST, HTML, CSS, JSON, XML
Build/Design Tools: Bamboo, Maven, Eclipse, VS Code
Debugging tools: Chrome Developer Tools, Firebug
Frameworks: Spring MVC, Spring Boot, Hibernate, React, TestNG, Selenium/Cucumber
Database: MySQL, Oracle
Version Control: GIT.   **Operating Systems:** Windows 7, 10, Mac OS X

Experience

Senior Software Developer
GuideHouse, April 2016 - Present
Project: The Value Set Authority Center (VSAC) is a repository and authoring tool for public value sets created by external programs.
Skills: Java/J2EE, JavaScript, jQuery, jQuery UI, TypeScript, HTML5, CSS3, JSON, Spring Boot, Spring MVC, React, TestNG, Selenium/Cucumber

- Involved in various phases of **Software Development Life Cycle (SDLC)**, including requirement gathering, modeling, analysis, designing, developing, and testing.
- Designed, developed and tested **HTML5, CSS3, Bootstrap, JavaScript, jQuery, ES2015, Ant Design and React.JS** that meets accessibility and web browser standards for websites.
- Developed user interface by using **React JS, Redux and Redux-Saga** middleware for SPA development.
- Used **React-Route**r to turn application into **Single Page Application.**
- Developed server-side application to interact with database using **Spring Boot** and **Hibernate**.
- Used Rest Controller in Spring framework to create **RESTful web services** and **JSON** objects for communication.
- Developed unit test cases using **TestNG** for API testing and test cases for functional testing of user interface using Selenium with Cucumber.
- Used **Postman** to test the RESTful API for HTTP requests such as GET, POST, PUT and DELETE.
- Extensively used **Git** for version controlling and regularly pushed the code to **Bitbucket.**
- Used **JIRA** as the bug tracking system to track and maintain history of bugs/issues on everyday basis.
- Extensively used debugging tools such as Firebug and Chrome Developer Tools to investigate issues and fix the bugs.
- Interacted with Testing Team and Business Analysts for fixing issues.
- Performed the System Testing, Regression Testing for complete UI after fixing the issues which are reported by Testing Team

Project: Terminology Service
Skills: Java/J2EE, JavaScript, jQuery, jQuery UI, HTML5, CSS3, JSON, Spring Boot, Spring MVC, TestNG,

- Developed user interface using **JavaScript, jQuery, jQuery-UI, ES2015**
- Developed server-side application to interact with database using **Spring Boot**.
- Implemented unit test cases using **TestNG** for API testing.
- Worked with testing team to resolve issues raised in application development.

Project: VSAC Code System Load
Skills: React, TypeScript
- Automated ETL loading process through ETL to user interface.
- Involved in end-to-end application from design to deployment.
- Developed user interface using **ReactJs, React Router** and **Ant design framework**.
- Extensively used **Git** for version controlling and regularly pushed the code to **Bitbucket.**
- Used **JIRA** as the bug tracking system to track and maintain history of bugs/issues on everyday basis.
- Extensively used debugging tools such as Firebug and Chrome Developer Tools to investigate issues and fix the bugs.
- Interacted with Testing Team and Business Analysts for fixing issues.

Machine Learning Projects
Binary classification using PyTorch on Pima Indian onset of diabetes dataset using MLP
Trained a neural network model to classify patients with diabetes based on input features like age, pregnancy, body mass index, blood pressure etc. For binary classification on Pima Indian onset of diabetes dataset, imported patient data and preprocessed the data. Using this dataset, built a neural network model with a hidden layer of 12 neurons followed by an activation layer and second layer with 8 neurons with ReLu activation and final layer of sigmoid function to predict if patient has diabetes. Using binary Cross-entropy loss and Adam optimizer with learning rate of le-3, achieved train accuracy of 76% and test accuracy of 74%

Image classification using TensorFlow 2.x on CIFAR-10 using MLP, RESNET50 and Vision Transformer
Implemented and trained CIFAR-10 dataset on three architectures (MLP, RESNET50 and Vision Transformer). Compared the training and validation accuracy of each architecture and analyzed model's ability to generalize to new, unseen data. Through this experiment, investigated how each architecture handles issues like overfitting and convergence speed. Vision Transformer had shown superior performance with 99.89% accuracy (99.26% validation), with its powerful self-attention mechanism. Deeper models like ResNet-50 demonstrated strong generalization at 85.07%, highlighting its depth and skip connections.

Image classification using TensorFlow 2.x on MNIST handwritten digits
Trained a neural network model to classify images on MNIST handwritten digits using Kera's API with Conv2D, MaxPooling2D and dense layers with ReLu and Softmax activation functions. Preprocessed the data and built the deep learning model using Adam optimizer and categorical Cross - entropy loss and achieved train accuracy of 98.7% and validation accuracy of 98.5%.

Image classification using TensorFlow 2.x on clothing
Trained neural network model to classify images of clothing, like sneakers and shirts. Implemented using tf.keras, the high-level API to build and train models in TensorFlow. For Image classification on clothing dataset, imported apparels data and preprocessed the data and built the deep learning model using Adam optimizer and categorical cross-entropy loss and achieved train accuracy of 89.8% and validation accuracy of 87.3% on test dataset.

Sentiment analysis using Tensor TensorFlow flow 2.x on IMDB reviews dataset
Conducted an in-depth model comparison on IMDB review sentiment analysis, involving MLP, LSTM, and Transformer architectures. Achieved a significant 99.61% training accuracy with the Transformer, showcasing its ability to capture nuanced sentiment patterns. Also, Transformer outperformed MLP and LSTM with a 91.70% accuracy on unseen test data, indicating robust generalization. This analysis highlights the Transformer's suitability for intricate sentiment analysis tasks in the IMDb review context.

Academic Projects
Project: Student-Course Registration Application, Jan 2015- May 2015
Description: Student Registration Application helps students to register, delete, drop and edit courses online. Developed various components like home page, login page, registration pages and course display pages on the website.
- Developed the User Interface using JSP, JSTL and Spring MVC Framework
- Developed web pages using jQuery and AJAX.
- Implemented REST service application with Spring Data and Spring JDBCTemplate in backend.
- Designed and developed DAO layer using Spring JDBCTemplate to perform basic CRUD database operations.

Project: Amazon Web Services (EC2 Cloud), The Hadoop Framework, June 2014 - Nov 2014
Description: To set up virtual cluster of 1 node on Amazon EC2, to install Hadoop on 16 nodes and perform the word count application.
- Performed setup of virtual cluster of 1 node on Amazon EC2.
- Written code for performing the word count in Java.
- Responsible for deploying the Java code on Amazon EC2 instance and calculating the throughput and latency.