

Satish Rella

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🐙 <https://github.com/satish112?tab=repositories>

👤 PROFILE

Experienced Knowledge in software engineering, machine learning, and Data science with a passion to put my analytical, statistical, and programming skillset to collect, analyze, and interpret large data sets to develop data-driven solutions by adding a pinch of seasoning to complicated business challenges on top by utilizing TensorFlow, Keras, Scikit-Learn and ML frameworks.

🎓 EDUCATION

Master's, Computer Science, University of Texas at Arlington 01/2019 – 12/2020 | Arlington, United States

M-Tech, Software Engineering, Vellore Institute of Technology 08/2012 – 05/2017 | Vellore, Tamilnadu, India

👜 PROFESSIONAL EXPERIENCE

Google, Software Engineer (Contract) 10/2021 – present
Mountain view, United States

- Developed a software interface for all Google Nest and third-party devices that provide standard CLI and RESTbased APIs for the development of sophisticated automation framework and maintaining device health check matrix.
- Worked on adding support for this tool to multiple hardware devices across google Nest, which is inherently different in Operating systems, communication protocols, and capabilities.
- Implemented Appless Infrastructure, logging, communication, flashing, set up, and OTA services for each device.
- Fixed tool-related issues, and implemented new features and capabilities based on users' feedback.
- Helped other teams to develop end-to-end Automation test framework for various smart home devices

TEKroon Solutions, Software Engineer 03/2021 – 09/2021
Elkridge, Maryland, United States

- Developed a J2EE/Java application using Spring Boot, works on multi-layer architecture to reduce complexity between the service layer which has business logic for the project and the repository layer interacting with a database.
- Consumed RESTful web services in the application. Used POSTMAN to check all REST API endpoints are working fine. JSON data is generated from these API calls.
- Implemented Spring Data JPA dependency which utilizes Crud Repository, having all built in logic for CRUD operations. Imported all the dependencies for the project using Maven. Used Query methods which helps in reducing code for queries

Tata Consultancy Services, Software Engineer (Project: AIG) 06/2017 – 12/2018 | Hyderabad, India

- We match the Treaty policies with the customer requirements and resolved the Service now tickets.
- Rescheduled and rewrite the Jobs in COBOL for effective health check of all applications and reporting the results.
- Used .XML Log files for checking Error exception handling.
- Enhanced the user interface of business application for the ease of use and resolved the support tickets.

Uptec Idealabs Private Limited, IoT Intern (Project: Ambience 12/2015 – 01/2016 | Hyderabad, India
Checkup Using Wireless Sensor Network)

- Designed and implemented a wireless sensor network that monitored the weather conditions.
- Collected the data from the node to Raspberry Pi using wireless systems.
- Pushed the collected data to an IoT analytics platform to visualize the data with every one-minute interval for updates of weather conditions from each node

PROJECTS

Portfolio-Website

- Developed a personal website using HTML5, CSS, JavaScript and bootstrap is used for styling.
- Hosted the application on Amazon web services (AWS)
- Migrated the whole project through MVC Framework (Laravel), later it deployed in the cloud.

Image Caption Generator Using CNN-LSTM

- Extracted the features of every photo from the convolution layers of VGG16 and RESNET50 models.
- Converted the text input to vector using the word embedding layer followed by LSTM.
- Predicted the caption of photo by merging the feature and word embedding vectors, processed by a dense layer

Face Detection from YouTube Data using Open CV:

- Collected the data with a specific date, time, location, length of video using API and extracted the faces in Keyframes of video.
- Using pre-trained machine learning classifier “ResNet50” and “Siamese Network” to find the face in public videos of YouTube.

Data modelling with PostgreSQL and Apache Cassandra

- Created database schema and built ETL pipeline (Python) to analyze the data of the Music streaming app.

Client-Server System (SNMP)

- Designed a client-server program in DOCKER using Socket Programming in python using CLI Library.
- Communicated between client and server, broadcast the messages, and share files between each other.
- Implemented a distributed locking system between the multiple servers on shared files.

Implemented 2PL

- Implemented a two-phase locking (2PL) protocol for concurrency control.
- The protocol to be implemented will be rigorous 2PL, with the wound-wait method for dealing with deadlock

Analyzing Sports data with NOSQL

- In this project, we used MongoDB as an example of a document-oriented NOSQL system, and see how data is stored and queried in such a system

Data Mining (Mini Projects)

- Statistical Exploratory Data analysis, Aggregation & filter & Ranking, Visualization conducted guided exploration on Federal Emergencies and Disasters dataset to identify the different patterns in data for further analysis.
- Decision tree, Naive Bayes classification, and K-Nearest Neighbor implemented on the Cardio dataset to find the active patients.
- K-means clustering, Hierarchical Agglomerative clustering models applied on Adult Dataset to locate who earned more than \$50,000 or not, and to visualize clusters for predicted and actual cluster labels.
- Apriori algorithm with different support & confidence was applied to the Shopping cart Dataset to find which items were sold.

Forecasting NIKE Revenue Data:

- Forecasted the Revenue of Nike Revenue data using Linear Regression, K-Nearest Neighbors, Pyramid-Arima, and FBProphet.
- K Fold cross Validation on the each of the model using training data for comparison of performance of models (with 5 Folds).

CERTIFICATES

- Udemy -Python for Data Science
- LinkedIn- Advanced SQL for Data Scientists
- LinkedIn – Tableau Essential Training (2020.1)