

# RISHABH SHUKLA

## PROFESSIONAL SUMMARY

Full Stack Engineer and ML Engineer with overall ~6 years of experience in frontend development, backend development, data base design, building classification and regression models to predict customer attrition and future best customer. Responsible for UI development/Integration, ML API development, and R&D data science. Hands on experience in building framework in Amazon web services, Azure Cloud.

## WORK HISTORY

### Manager (Level 3), 03/2021 - Current TCG Digital, Kolkata, India

- Developed API to calculate net present value, Internal rate of return, Profitability index, and Cash Cost using Python and **Pro II optimizer** simulation results
- Developed API to Generate cashflow report and send as email attachment to user via client SMTP server
- Developed **PDF annotation tool** using **JS & JQuery** plugin and integrated to Angular as external script.
- Developed chart editor component which lets users to edit chart legends, icons, colors using json based structure from DB.
- Developed **blockchain** POC using truffle suit and Ganache server using node API for applications to communicate with smart contracts.
- Developed **web scrapping** script to download SGX exchange data for ETL jobs
- Developed 5 UI's from scratch using authentication, authorization, Dashboards, visualizations, custom components and libraries, export data to PDF / Excel

### Consultant, 09/2020 - 03/2021 TCG Digital, Bangalore

- Developed Data Visualization tool which allows users to compare Tag sensor data using different kinds of visualizations for 1000-5000 concurrent users
- Flask API** For KYC verification using transfer learning and **Tesseract** taking image as input and giving match percentage with user data available in DB
- Developed 5+ UI project setup and development as part of polymer plant automation using angular/vanilla JS

### Software Engineer, 03/2020 - 08/2020 DSI Consulting, Kolkata

- Developed 4 UI's for leading polymer plant in india as a part of polymer plant automation
- Developed web-forms for polymer plant reporting with features like PDF/ Excel report generation(from UI).
- Developed dashboards, Charting libraries, reporting tools using vanilla JS, Angular, Angular Materials



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## SKILLS

### Frontend -

Angular(2/14),NGRX,HTML5, CSS3.Bootstrap,REST integration, JWT, report generation/ formatting, custom visualization

**Backend** - Python,Flask /Fast API, Node JS, express JS, database design, design patterns, micro service architecture ,web architecture, data storage and retrieval.

**Programming Languages** - Python, Javascript, typescript, ECMAScript 2019/ 2021

**Databases** - MYSQL, MongoDB, MYSQL Server

**Version control system** - Git, Github, Gitlab, bitbucket, SVN, JIRA

**Cloud** - Amazon web services (EC2,Lambda)  
Azure Cloud (Basics)

### Other Libraries/ Tools/ Utilities -

Docker, Kubernetes, Pandas, Numpy, NLTK, Scikit-learn, Statsmodel, BeautifulSoup, Seaborn, Matplot, Excel, JSPDF,HTML2PDF, Pdf Annotator JS, Echarts, googlecharts, Amcharts, Excel Js, Angular Material, Bootstrap,Tailwind css, Flask, xlsxwriter, scipy, matplotlib, plotly.

## ACCOMPLISHMENTS

- Conducted Organization level training on frontend web development with angular twice at TCG
- Received 6 Team spotlight award for frontend web development at TCG for different projects.

## CERTIFICATIONS

- The Complete 2021 Web Development Bootcamp
- AWS Technical Professional

## EDUCATION

**Software Developer, 08/2019 - 11/2019**

Grextor Living PVT. LTD., Bangalore

- Developed tenant management dashboard facilitating more than 600 users to digitally sign rental agreement at time of tenant onboarding, monthly payments, add food subscriptions, change bed requests etc.
- Developed Node API for generating reports for Bed count and sending them over mail to operations team

**Software Engineer, 03/2017 - 06/2019**

BizRuntime IT Services, Bangalore, India

- Developed UI for maps for locating different Oil /Gas wells with markers and web forms using Mapbox3d, Open layers and GIS server
- Developed custom charts (sankey charts/line/area charts) using vanilla js and zoomdata
- Developed optimized SQL queries for getting dashboard results for inside analytics using mysql server and zoomdata query engine.
- Integrated Sonar cube to existing application for code quality analysis.

## DATA SCIENCE CASE STUDIES

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**1. Credit Card Fraud Detection**

- Objective: To predict fraudulent credit card transactions from an imbalanced dataset.
- Solution: Constructed Logistic Regression, Random Forest, SVM and XGBoost models
- Key Achievement: Developed the final model using XGBoost with Precision/Recall of ~ 99%.

**2. Gesture Recognition using 3D Convolution and RNNs**

- Objective: Gesture Recognition using 3D Convolution and RNNs
- Solution: Constructed 3D CNN model and a 2D CNN + RNN model to do gesture recognition
- Key Achievement: Developed 2 models 3D CNN and 2D CNN + RNN model to achieve accuracy of 81% and 91% respectively.

**3. MNIST Dataset recognition using Neural Nets**

- Objective: Create a neural net and implement Data preparation, Feedforward, Loss Computation, Backpropagation, parameters updates steps using numpy
- Solution: Constructed a Neural Network using Numpy to MNIST dataset digit classification
- Key Achievement: Achieved an accuracy of 87%.

**4. Leads Scoring**

- Objective: To increase the leads conversion rate from 30% to 80%
- Solution: Created a classification model using RFE and Logistic Regression
- Key Achievement: Identified top factors affecting leads and Proposed a final Logistic regression model with precision of 77% percentage.

**5. Telecom Churn**

- Objective: To identify customers at high risk of churn and identify the main indicators of churn
- Solution: Constructed Logistic Regression, Random Forest, SVM and XGBoost models

Post Graduate Diploma , Data Science ,  
05/2022

IIIT-B - Bangalore

CGPA- 3.15/4

**B.E, ECE**

Reva Institute of Technology And  
Management - Bangalore

- Key Achievement: Developed the final model using Random Forest with Sensitivity of 80%.

## **6. House Price Prediction**

- Objective: To predict the prices of houses and also find the top 5 driver variables.
- Solution: Advanced Regression model(using Lasso and Ridge Regression) to predict the house price and also to find the top 5 driver variables for each model.
- Key Achievement: Created a predictive model using Ridge Regression with R2\_score of 78% (approx) and Lasso Regression with R2\_score of 76%(approx).

## **7. Stock Market Analysis**

- Objective: To generate Buy and Sell signal for stocks based on Moving Averages
- Solution: Calculated 20 Day and 50 Day Moving Averages to generate signal (Buy/Sell/Hold) for stocks
- Key Achievement: identified signal for the stocks using the Closing Price.

## **8. Car Price prediction**

- Objective: To model the price of cars with the available independent variables and understand the topmost factors affecting the pricing of cars .
- Solution: Linear Regression model to predict the price of cars .
- Key Achievement: Predicted the prices of cars with R2\_score of 0.76 and also identified the factors affecting the prices