**Shafin Mohammed**

Davis, CA 95616, Phone: (530)-902-0579. Email: [shafinmohammed@gmail.com](mailto:shafinmohammed@gmail.com)

[LinkedIn](https://www.linkedin.com/in/shafin-mohammed-50615447/) • [Github](https://github.com/shafin071/) • [Portfolio](https://shafin071.github.io/shafinmohammed.github.io/#home)

**SUMMARY**

Python, SQL developer looking to implement AI solution used to streamline and automate

products / processes which are critical to organization’s business models.

Background in Telecommunications industry as a RF Engineer. Engaged in small cell planning, data collection and Electromagnetic Emissions analysis projects to help leading telecommunications service providers (Sprint, Verizon, AT&T) improve 4G services

**TECHNICAL SUMMARY (Data Science & Software)**

* Experience in developing complex calculations and data analytics API with **Python**
* Exploratory data analysis with machine learning (**KNN, SVM, Random Forest Classifier, Gaussian Naïve Bayes**) and deep learning algorithms (**TensorFlow, Keras**)
* Proficient with **SQL** to extract business metrics from database
* Experience in creating data visualization with **Plotly** and **Tableau**
* Hands-on knowledge on **Hadoop, Spark**
* Developed both backend and front-end of web applications with **Django**, **Django REST Framework**, **HTML**, **CSS** and **JavaScript**
* Automation testing with **Python unittest** and **Selenium**

**TECHNICAL SUMMARY (RF Engineering)**

* Spearhead Electromagnetic Emissions analysis program for employer
* **Market Lead** for south region market for **Sprint’s Small Cell LTE/VoLTE (4G)** project
* Data collection at large **DAS** venues using **SeeHawk** and **TEMS Pocket**
* Monitored DAS Commissioning

**TECHNICAL SKILLS**

Coding Language: Python, SQL

Data Science/ML: Numpy, Scipy, Pandas, Scikit-Learn, Statsmodel, NLTK, TensorFlow, Keras, Spark

Database: MySQL, PostgreSQL, SQLite

Web Framework: Django, Django REST Framework

Web Application: Github, AWS S3, AWS EC2, Heroku, Postman

API: Stripe, Google Map, Mapbox

Wireless Standards: LTE, UMTS/WCDMA

RF Tools: SeeHawk, TEMS Pocket, ArcGIS, Roofview

**WORK EXPERIENCE**

**Application Engineer, March 2019 – February 2020**

**IDARE LLC, Dhaka, Bangladesh**

Part of a startup team with a vision to develop a SaaS for the Oil/Gas industry that automates subsea pipeline designs to significantly reduce project completion time.

* Responsible for implementing vast amount of calculations in IDARE’s application engine.
* Converted complex Mathcad calculations to analytics scripts using Python’s scientific libraries (Scipy, Numpy), Scikit-learn for ML modelling and data visualization libraries (Plotly, Cufflinks).
* Implemented algorithms like binary search and memorization to speed up calculation
* Analytics served as API using django and django REST framework
* Created interactive UI using vertical stepper template and jQuery for users to send input data to the analytics API
* Reduced design phase of a 100km pipeline from about 2 weeks to just a few seconds

**Software Developer, January 2018 – February 2019**

**UDPlatforms, Dhaka, Bangladesh**

**SQL Data Analysis:**

* Extracted data from Moodle database and created a dashboard using MS Excel and SQL to show interpreter demand and shortages which helped the interpreter service staff more efficiently and reduce missed appointment by 40% in the next quarter

**Map Visualization Project:** Developed a prototype for a web-based solution to visualize traffic data in USA

* Data was extracted from large csv files and loaded into PostgreSQL database.
* Queried, filtered data from database and sent them to Google Map API for visualization
* Used Google Map API features like marker clustering, custom markers with info window and choropleth map

**Moodle Support:**

* Provided administrative support and troubleshooting for a Moodle based interpreter education and service platform.

**RF Engineer**

**Mobilitie LLC, Atlanta, GA**

**April 2016-November 2017**

* **Market Lead:** Responsible for the south region market for Small Cell LTE/VoLTE (4G) project. Worked with the Network Real Estate (NRE), Site Selection & Sprint local RF teams to review and approve Small Cell candidates using ArcGIS.
* **Team Lead:** Introduced and implemented Electromagnetic Emissions (EME) analysis program and process flow in Mobilitie to aid permit application for small cell and backhaul candidates.
* **DAS Commissioning:** Attended and monitored DAS Commissioning process. Worked with the commissioning engineer to gain key insight on in-building infrastructure and DAS optimization.
* **DAS Benchmark & Optimization:** Performed drive/walk tests for Benchmark reports using SeeHawk and TEMS pocket. Good knowledge of LTE/CDMA/UMTS desirable KPIs. Finish tests within the given deadline regardless of challenges/setbacks faced.

**RF Engineer**

**Telnet-inc, Rockville, MD**

**July 2012 – March 2016**

* Part of an Electromagnetic Emissions (EME) Compliance team in different AT&T, T-Mobile and Verizon markets. Used raw EME data from various client antenna sites to create EME reports and perform Computer Modeling & Calculation using “Roofview” to ensure the sites are FCC compliant.

**PROJECTS**

**Loan Risk Prediction with TensorFlow and Keras:** [Github](https://github.com/shafin071/lending-club-TF-Keras/blob/master/Lending_Club_Analysis_with_TF_Keras_trial.ipynb)

* Developed a model that predicts if a loan will default to help lending businesses make better decisions for approving loans
* The model was built using TensorFlow, Keras and trained with a 90MB Lending Club dataset.
* Model predicted loan outcome with 0.94 precision and 0.93 recall.

**COVID-19 Analysis:** [Jupyter Notebook](https://shafin071.github.io/covid19-analysis/)

* Data visualization and forecast on S. Korea COVID-19 dataset using Python
* Map visualization of contagion using Plotly and Mapbox API. Forecast using Statsmodels exponential smoothing on date-time series
* Forecast had a MAPE of 2.41%.

**Data Analysis with SQL & Tableau:** [SQL Code](https://github.com/shafin071/SQL-Tableau-for-eCommerce)  [Tableau Dashboard](https://public.tableau.com/profile/shafin.mohammed#!/vizhome/MavenFuzzyFactorySalesReport2014part4butterfly/Story?publish=yes)

* Created annual business performance report for Maven Fuzzy Factory, an eCommerce website
* Highlighted business KPIs (profit margin from different advertising channels, conversion rates, click-through-rates etc.) and A/B testing results
* Data queried using MySQL and visualized with Tableau. Suggested business actions based on data trends

**<Hello World/> Full-stack project:** [Website](https://shafin-elearning.herokuapp.com/) [GitHub](https://github.com/shafin071/hello-world)

* A dummy eLearning website built with django, REST Framework, JavaScript, Bootstrap, Stripe API
* Provides user experience as a student. Hosted with Heroku and AWS S3.

**pybot n00b:** [Watch Demo](https://youtu.be/aqrQ4hAe17Q) [GitHub](https://github.com/shafin071/pybot.n00b)

* Automated test performed on [<Hello World/>](https://shafin-elearning.herokuapp.com/) project.
* Script written with Python unittest module and Selenium.
* The test results are formatted and emailed.

**EDUCATION**

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| ***Undergraduate***  ***George Mason University, VA***  September 2009 – May 2012  Electrical Engineering | ***Graduate***  ***George Mason University, VA***  January 2015 – May 2017  Telecommunications |

**CERTIFICATIONS**

* Advanced SQL + MySQL for Analytics & Business – Udemy
* PyTorch for Deep Learning with Python Bootcamp
* Python for Data Science and Machine Learning Bootcamp – Udemy
* Machine Learning by Stanford University – Coursera
* Spark and Python for Big Data with PySpark – Udemy