# **Ravi Shankar**

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### **Education**

# University of Massachusetts, Dartmouth

July 2018

• Master of Computer and Information Science

# Shaheed Zulifkar Ali Bhutto Institute of Science and Technology, Karachi

June 2013

• Bachelor of Computer Science

# Thesis: Analyzing Noise in Trajectory Data

September 2017 - May2019

- Analyzed noise patterns, outliers in the trajectory data
- Cleaned the data using different statistical and mathematical approaches to detect the noise in the data
- Used bounding box technique to separate the short distance sub trajectories.
- Introduced techniques to partition the data with different time and distance gaps.
- Used marine vessel traffic data and geolife trajectory data
- Created geometry (geojson) files for visualizing large amount of data.
- Used multiple Python libraries (Pandas, NumPy, Parquet, Fiona, Folium, scikit-learn).

# **Experience**

# University of Massachusetts, Dartmouth

May 2017 - current

#### **IT-Assistant**

- Worked with university CITS (Computing and Information Technology Services) team who provide technical service for all the computer systems and websites at university and maintain them
- Worked on Salesforce for reporting bugs, used LAN school for controlling lab computers.
- Assisting faculties with their systems, and with IT classroom equipment and troubleshoot IT Labs problems

## Bank Al Habib Limited, Karachi

March 2014 – December 2015

#### <u>Software Developer</u>

- Build internal banking web-based modules, such as (Account Opening Process)
- Build reports using SQL Server Reporting Services (SSRS) using SQL Procedures and complex challenging queries and calculations to work with large amount of data
- Used Microsoft .Net MVC Framework (C#), JavaScript, Ajax and Microsoft SQL Server 2012, also worked on Entity Framework approach for some modules
- Worked on Microsoft Team Services tools embedded with Visual Studio for bugs reporting and resolving
- Followed Agile methodology, attended three days training

#### Pakistan Telecommunication Limited (PTCL), Karachi

June 2012 – August 2012

#### <u>Internee</u>

- Developed a web based internal system to put their data at one place, for querying easily
- Build a dashboard which supports insert, update, search, report generation facilities
- Used PHP and MySQL for backhand and MySQL database
- Completed the Assignments of calculation of sub-netting

# Skills

- Languages: Python (Pandas, NumPy, PySpark, Folium, Scikit-learn), JavaScript (D3, jQuery), C#, Asp.Net MVC4, HTML5 and CSS
- Database: SQL Server 2012, MySQL, SQL Server Reporting Service
- Tools: Anaconda 3 (Jupyter Notebook), Visual Studio 2012, Tableau, MS-Office

# **Projects:**

- **Scalable Data Analysis:** Worked on Amazon Clouding Services (EC2, EMR, S3- Storage) for Big Data scalability for Assignments and configured the Jupyter Notebook, used PySpark for analysing the Iris Data
- Visualization: Worked on the New York City Bikes data taken from their NewYorkCityBikes web page. Visualized
  and analysed some important trends and fact about the Bike rides, used the leaflet library to visualize the highest number
  of stations on map with bubble chart, analysed the bikes rides according to the age groups. URL: <a href="https://goo.gl/2bi3T7">https://goo.gl/2bi3T7</a>
- **ERP System Home Garden Shopping:** Designed and developed an ERP system, used PHP and MS-SQL, performed basic operation, such as purchasing things online, viewing items, adding new items and all.
- Android Bluetooth Car: Created android application, to control the android bluetooth car, developed basic features to perform such as moving forward, backward, right and left, sound and lights on and off functions, connected with the Bluetooth shield, and Arduino Programming.