GOUHER DANISH

Email: gouherdanishiitkgp@gmail.com
Mob: +91-8792558264

EDUCATION

Year	*Degree*	*Institution(Board)*	*cgpa/%*
2012	B.Tech (Mechanical)	IIT Bhubaneswar, India	8.48/10
2007	XII	MK DAV Public School, Jharkhand, India	89.6%
2005	X	Rotary School, Jharkhand, India	92.8%

PROJECT EXPERIENCE

2019 - Project Name – Network Analytics
Company – BDI Plus Labs
Role – Data Scientist
Responsibilities –

- Implemented Graph Algorithms e.g. Djikstra's Shortest Path and Shortest Strongest Path Algorithms to find the shortest path between two persons in a network
- Implemented Graph modification algorithms e.g. Graph Min Cut to cut a large graph into two small graphs
- Developed Graph message-passing algorithms e.g. Belief Propagation to find the influence of one person onto another person in a network based on the strength of their relationship
- Used statistical techniques and implemented into the Graph to find important network parameters e.g. Network Density score, Quality score, Node Centrality, Closeness and Betweenness scores etc.
- **Skills Used** – Scala, Spark, Hive

2019 - Project Name – Customer 360 View
Company – BDI Plus Labs
Role – Data Scientist
Responsibilities –

- Prepared customer PII and events information as a JSON file and stored in Mongo DB
- Evaluated Customer signal scores using Belief Propagation algorithms based on his events e.g. Fraud signals, Attrition signals, Transaction score etc.
- **Skills Used** - Scala, Spark, Hive, Mongo DB

2018 - Project Name – Customer Data Creation
Company – BDI Plus Labs
Role – Data Scientist
Responsibilities –

- Prepared synthetic data according to the customers demographics e.g. for US, Middle East, India
- Studied about the business and product line of a company and tailored the customer data as needed
- Created PII data and customer events data to capture the customer's transaction, payments behaviour
- **Skills Used** – R, SQL

2018 - **Project Name** – Pump Data Analytics
Company – Infosys Ltd, India
Role – Engineering Analyst (Advanced Engineering Group)
Responsibilities –

- Initial trials using SVM and Random Forest
- Also tried anomaly detection using Self-Organizing Maps (SOM)
- Finally found good result with Multivariate Time Series using Vector Auto-Regression (VAR)

2017 - **Project Name** – Chiller Data Analytics
Company – Infosys Ltd, India
Role – Engineering Analyst (Advanced Engineering Group)
Responsibilities –

- Diagnosing the chiller sensor data using Exploratory Data analysis
- Forecasting Chiller data using VAR multivariate Time Series model
- Finding optimum parameters to gain energy and cost savings

2017 - **Project Name** – Water Demand Forecasting
Company – Infosys Ltd, India
Role – Engineering Analyst (Advanced Engineering Group)
Responsibilities –

- Predicting daily water demand using Time Series Forecasting
- Implementing multivariate VAR model to improve prediction accuracy
- Used various algorithms such as fbProphet, Linear Regression, SVM and MLP ANNs

2014-17 - Project Name–Aircraft Stress Analysis
Company – Infosys Ltd
Role – Engineering Analyst
Responsibilities –

- Stress analysis of MAX Airplane Tail components - Torque Box and Texas Star
- Stress analysis of Fuselage Frames, Doorsills, Shear Ties, Stringer Clips etc.
- Strength Check Note (SCN) Documentation

2012-14 - Project Name– Aircraft Stress Analysis and Concessions
Company – Infosys Ltd
Role – Engineering Analyst
Responsibilities –

- Stress analysis of A350 Fuselage, Spar and Frames
- Stress Dossier Documentation

EXTRA PROJECTS

1) **Airports Dataset Study**
   - The airport data contained information about the airports in the World. Taken this as vertex RDD.
   - The route data contained information about source and destination airports. Taken as edge RDD
   - Created a Graph using the vertex and edge RDD and found the busiest airport as Atlanta Intl, USA
2) **WHO Suicides Data Study**
   - Exploratory Data Analysis found the following observations on suicides stats –
     a) Russia, USA and Japan had highest number of suicides reported till 2016
     b) Suicides in USA are rising at an alarming rate in the recent years
     c) Middle Aged suicides in USA have almost doubled between 1985 and 2015
   - Published a Kaggle kernel

ACADEMIC ACHIEVEMENTS

2011 – Published a conference paper on "Novel FEM Formulations for Maxwell's Equation" at IISc Bangalore
2010 – Developed C code for a computational solver using edge-based FEM formulation for 2D and 3D FE Waveguide Discontinuity Problem; This work was showcased at CFD workshop at C-DAC and ADA, Bangalore
2009-2011 – Core Team Head Of Fine Arts Society, IIT Bhubaneswar
2008 – All India Rank 6506 in IIT-JEE
2007 – Appeared For National Mathematics Olympiad.

EXTRA ACHIEVEMENTS

1. **Analytics Vidhya Game of Deep Learning Computer Vision Hackathon, May 2019**
    - *Problem* – Ship Classification with five ship classes (Multiclass Classification)
      (Total ~6300 Training images, ~2300 Testing images , 212 * 128 size variable)
    - *Approach* –
        i. Trained the data on 80% of training images and used 20% for validation
        ii. Used Transfer Learning with Xception Architecture (135 layers)
        iii. Used Data Augmentation to reduce overfitting
        iv. Used Callbacks to improve model performance (Early Stopping and Reduce Learning Rate On Plateau)
    - *Technology Used* – Python, Jupyter Notebook, Keras on Tensorflow Backend
    - *Results* – ~97 % Training Accuracy, ~94% Validation Accuracy and ~95% Test Accuracy (15 Epochs)
    - *Rank* - 136 on Private Leaderboard and 127 on public leaderboard out of 2086 participants
2. **HackerEarth LMG Analytics Hiring Challenge, Nov 2018**
    - *Problem* – A Company is planning to open new stores. Using the customers' transaction data, we need to predict if a customer will visit the new stores or not. (Binary Classification Problem)
    - *Approach* –
        i. If a customer has visited a store before, labeled the data as 1(Visited); otherwise labeled as 0
        ii. Used Feature Engineering to create new attributes e.g Age Category
        iii. Selected important features based on Gini index e.g. Customer Points, Loyalty, Marital status, Region, Store size etc.
        iv. Used Random Forest model with 100 trees
        v. Scope of Improvement - Model could be improved using more feature engineering
    - *Technology Used* – R
    - *Rank* - 71 out of 4464 participants
3. **Analytics Vidhya American Express AmExpert ML Hackathon, Nov 2018**
    - *Problem* – Predict if a user session will result in item click or not (Binary Classification Problem)
    - *Approach* –
        i. Handled Null values for Categorical features by imputing with highest used categories
        ii. Created new features namely user click score to indicate the propensity for the user to click on an item and product click score to indicate the attractiveness of the item
        iii. Used Random Forest model with 400 trees
    - *Technology Used* – R
    - *Rank* - 599 / 4526

4. Selected to work on a Journal Paper "FEA and failure load prediction of Critical Aircraft Joints" at Infosys

TECHNICAL SKILLS

1. **Programming –** R, Python, Scala, Spark, SQL, Excel
2. **Machine Learning –** Classification, Regression, Deep Learning , Time Series
3. **Algorithms -** SVM, VAR, SOM, Neural Networks, Random Forest

ONLINE CERTIFICATIONS

Year	***Online Course Name***	***Platform***	***Marks***
2019	Spark Level 1	Cognitive Class, IBM	Completed
2019	Exploring Spark GraphX	Cognitive Class, IBM	Completed
2018	Machine Learning by Andrew Ng	Coursera, Stanford	96%
2018	ML Crash Course with TensorFlow API	Google	Completed
2017	Introduction to Python for Data Science	edX, Microsoft	94%
2017	Blended Machine Learning Training	Infosys	Completed
2017	Citizen Data Science Specialization	Infosys	Completed
2014	Elements Of Structures	edx, MIT	96%
2014	Mechanical Behavior Of Materials	edx, MIT	94%

AWARDS

2017 - Received **Insta Award** for Python Expertise
2017 - Received **Most Valuable Player (MVP) Award** for outstanding leadership
2016 - Received **Insta Award** for all-round performance in all modules
2015 - Received **Spot Award** for outstanding work ethic and technical excellence
2014 - Received **Team Magnet Badge** for excellent leadership and team working skills in Airbus A350 Project.
2008-12 - Received **Merit-Cum-Means (MCM) Scholarship** for four consecutive years at IIT Bhubaneswar

INTERESTS

- Teaching
- Reading Blogs and Articles