TINKU DHULL

AEROSPACE ENGINEERING (B.Tech)

EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2018	B.Tech	IIT Kharagpur	8.04 / 10
2014	Higher Secondary	CBSE Board	89.6%
2008	Secondary	Haryana Board	10 / 10

COMPETITION/CONFERENCE

Predict Ad Clicks   **HackerEarth Machine Learning Challenge**   **July-August 2017**

- **Ranked 1 out of 5300 participants** in the competition sponsored by **IBM**, won a prize money of **$700**
- Predicted the probability of an ad click, created many new features to improve the model performance, got an auc of 0.684
- Used gradient boosting technique to train and validate the model on dataset of **size 1.2 GB**
- Removed highly correlated features to prevent the model from overfitting and to get a good bias-variance trade-off

Customer Service Improvement   **Analytics Vidhya ML Hackathon**   **April 2017**

- Built a model to predict the number of enquiries made by the consumers towards the water management company of Barcelona
- Based on the enquiries, built another model to predict the number of requests made by the consumers
- Combined RMSE of both the models was 94.84, **ranked 14 out of 2405 participants**

Movie Recommendation System   **Capillary's IIT KGP Data Science Challenge**   **September 2017**

- Built a model that recommends 5 movies for a user based on the movies already watched, **ranked 4 out of 338 participants**
- Used **k-means clustering** to create clusters of movies and assigning each user to a particular cluster

Digit Recognizer   **Kaggle**   **March-July 2017**

- To correctly identify the digits from handwritten images, fully connected neural network result in an accuracy of 97.4%
- To increase the accuracy, used **convolutional neural networks** which boosted the accuracy to 99.47%

New York City Taxi Trip Duration   **Kaggle**   **July-August 2017**

- Built a model to predict the total ride duration of taxi trips in New York City
- Explored the data using several graphs and plots for finding out the relative importance of different variables
- Created new features and applied gradient boosting algorithm to get RMSLE of 0.391

Understanding Customer Purchase Behaviour   **Analytics Vidhya**   **March-April 2017**

- From the demographic data of customers and their previous purchase histories, built a model that predicts their purchase amounts
- Normalized the data after missing values imputation, applied various machine learning algorithms like random forests, linear regression, deep learning, gradient boosting to build the model
- Built an ensemble model of two boosting algorithms which gave the best result

INTERNSHIPS

Automation of Leave Management System   **ValeurHR E-Solutions Pvt. Ltd.**   **May-June 2017**

- Worked on the project, aimed to devise a model that can automatically sanction or reject the leave application of an employee
- **Implemented feature selection techniques** to select the most important features for model building
- Trained and tested the logistic regression model using 10 fold cross validation, got an **auc of 0.8084**
- The **developed model replaced the manual method** used before, hence **increased efficiency** and reduced latency

Market Research   **Zenten Media Pvt. Ltd.**   **June 2016**

- Devised a new model to analyse the **text data using statistical software R**, saving a lot of manual work and time
- Analysed the social media data and finally came up with a list of top Dermatologists and Veterinary Doctors in Gurugram
- The proposed work was **implemented in the company's website**

SKILLS AND EXPERTISE

- Programming Languages : C, Java, R, Python
- Data Analytics : Machine Learning
- Softwares : Solidworks, Microsoft Office, MATLAB

COURSEWORK INFORMATION

- Probability and Statistics
- Numerical Solutions of ODE and PDE
- Computer Applications in Aerospace Engineering
- Transform Calculus

AWARDS AND ACHIEVEMENTS

Diploma in Mechanical Engineering   **Govt. Polytechnic Institute, Nilokheri**   **2008-2011**

- Completed 3-year diploma in mechanical engineering with 74.5% marks
- Received scholarship during all the three years for good academics

EXTRA CURRICULAR ACTIVITIES

- Part of 2 consecutive gold winning inter-hall Water-polo team, Rajendra Prasad Hall of Residence 2016-2017
- Part of inter-hall Aquatics team, Rajendra Prasad Hall of Residence 2017
- Volunteer in National Service Scheme (NSS), taught English and Mathematics in the Ghagra Primary School, surveyed 2 villages and helped people in opening bank accounts
- Key member of gold winning illumination and silver winning rangoli team 2016