

DURGA KANT GUPTA

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ACADEMIC DETAILS

YEAR	DEGREE	INSTITUTE	CGPA
2018	M.Tech (Industrial & Management Engineering)	IIT Kanpur	9.2/10
2017	B.Tech (Biological Sciences & Bio Engineering)	IIT Kanpur	7.3/10
2013	Intermediate (CBSE)	JNV, Bangalore	89.6%
2011	High School (CBSE)	JNV, Kannauj	10/10

INTERNSHIPS

Elucidata Data Consulting Pvt. Ltd. (New Delhi) (May-July 2017)

EluciTrack (Tracker for Data Science projects)

- Implemented **Airbnb's Knowledge Repo** to make analysis/insights of different Data Science projects reproducible, trackable and shareable
- Created a **Python package** for **generating signed URLs** corresponding to files on **Amazon S3** to facilitate navigation and viewing files

cBioportal_Wrapper (cBioportal is a website to access and analyze open-source Cancer Genomics datasets)

- Contributed in creating an **R-package** namely **cBioportal_Wrapper** for downloading and analyzing all the cancer data from cBioportal website
- Created scripts to perform **Survival Analysis** on cancer patients data, **mutual exclusivity analysis** using **Fisher's Exact Test** for different genes
- Used **R API's** to connect this package to a mutation curating database to extract the existing literature associated with the known mutations

IndiaMart (Noida, Head Office) (May-July 2016)

Buy Leads Enrichment and Prediction using Advanced Data Analytics (Buy Leads: Online buyer requirements)

- Performed **Cost-Benefit Analysis** of **Auto-Rejection** of Intent generated leads by matching product name with its secondary micro category
Impact: Saved **8440** genuine leads/week from deletion by suggesting not to implement auto rejection inside the system
- Developed, analyzed and initiated the implementation of **Automatic Product Mapper** to map a product to its **most relevant Micro Category**
- Considered maximum string match (of product name with Mcat name) and **maximum no. of leads** for that Mcat in previous **3 months** data
Impact: Resulted in **>100%** increase from **142** to **321 leads per product** when compared to the existing search algorithm on IndiaMart portal
- Performed **Text Analytics** to create an extensive database of most recurred Brands for a particular Micro category of products

YavTech LLC (Washington DC, USA) (Dec 2015)

Stock Price Prediction

- Developed a **Linear Regression** model in **R** for the **prediction** of Future Stock prices of a company based on its past financial data
- Modeling factors used for the prediction were **GDP**(Economic Growth), Interest rates, **sector specific factors** such as **P/E ratio** and **company specific factors** such as company growth, EPS change etc

RELEVANT COURSES

Statistics and Computing: Data Mining and Knowledge Discovery | Machine Learning Techniques | Statistical Modeling for Business Analytics
Data Structure & Algorithms | Probability & Statistics | Basic Computing | Advanced Statistical Methods for Business Analytics | Regression Analysis
Finance & others: Accounting and Finance | Financial Engineering | Introduction to Economics | Marketing Research | Social Media Analytics

ACADEMIC PROJECTS

Credit Card Fraud Detection using Machine Learning Algorithms (Under Graduate Project) (Jan-Apr 2017)

- Dataset consisted of 284,807 tuples and 28 features with only 492 cases of frauds (**0.172%**) leading to the problem of class Imbalance
- Applied **SMOTE** to handle **Class Imbalance** problem and used **Confusion matrix** and **ROC curve** for quantification of accuracy of the model
- Performed classification using **Logistic Regression, Decision Tree, K-Nearest Neighbors, Support Vector Machines** and **Adaboost**

Result: On considering the trade-off b/w accuracy and specificity, Decision tree performed best with **95.27%** accuracy and specificity of **95.6%**

Prediction of Fuel Flow rate of an Aircraft during different phases of a Flight (Data Mining - IME672A) (Jan-Apr 2017)

- Applied **Data pre-processing** techniques and **PCA** for dimensionality reduction on data taken from live competition on CrowdAnalytics.com
- Modeled using **Lasso** and **Ridge Regression, Regression Tree, Artificial Neural network** and Ensemble methods (**Random Forest** and **XGBoost**)

Result: **Ensemble Methods** performed better with **RMSE** of only **~2.6%** compared to **~5%** error rate obtained using other methods

Time Series Forecasting model for Quarterly RBI lending rates (Statistical Modelling for Business Analytics - MBA652A) (Jan-Apr 2017)

- Approach1:** Forecasted the RBI lending rate using **ARIMA** model, plotted **Autocorrelation function** to quantify the optimum no. of lags
 - Approach2:** Performed **Autoregressive Distributed Lag Modeling** of Interest rate with **AR1** and Inflation rate of Immediate next quarters
- Result:** Established that the current RBI lending rate depends significantly on the rate during the previous quarter for Auto-regression
- Model resulted in a positive correlation between change in Inflation rate and change in Interest rate with a **lag order of 2**
 - Concluded from this lag of order 2 that the **Policy changes** by government for countering inflation do not come into effect immediately

TECHNICAL SKILLS

Programming Language: R | Python | C | C++ | SQL | HTML | CSS | Bootstrap **Software:** RStudio | Excel **Platforms:** Windows | Linux **Database:** MySQL

POSITIONS OF RESPONSIBILITY

Department Placement Coordinator (Student Placement Cell, IIT Kanpur) (Apr 2016-Apr 2017)

- Part of a 24-member team entrusted with the responsibility of conducting successful placement session for 2017 graduating batch
- Negotiating with pharmaceutical, biotechnology, life sciences companies throughout the country to recruit students from the department
- Consulted HOD & professors to get more companies on board, Formulated proposals and conducted **placement/internship sessions**

Coordinator, Informal's, Udghosh'15 (Annual Inter-college sports festival of IIT Kanpur) (Jan-Sep 2015)

- Leadership:** Led a team of **25 secretaries** for conducting over **20 mid-festival** informal events
 - Developed a detailed layout plan for the events and procured logistics for the set-up through a number of dealers from Kanpur, Lucknow
- Initiatives:** Started **online registration portal** for participants and new events such as blind date, paint ball etc. to add a new dimension of fun

Senior Executive, Public Relations, Antaragni'15 (Annual Inter-college cultural festival of IIT Kanpur) (Jan-Nov 2015)

- Part of a 25 member 3 tiered PR team responsible for contacting famous personalities
- Responsible for the execution of **Kavi Sammelan** and **India Haat**, also for hospitality/accommodation of the celebrities coming to the festival

EXTRA CURRICULARS

Analytics	Secured 1st position in Battlefield, a National Level Analytics Competition organized by Tiger Analytics & Techkriti IIT Kanpur
Scouts	Recipient of Rajya Puraskar in scout, Received A grade in 248th National Adventure Program held at Pachmarhi hill station
Films & Media	Represented the pool and Secured 1st position in Bicycle Ad competition in Spectrum'14 (Annual Event, Films & Media Council)
Sports	Participated in Cluster level Hand Ball Meet held at JNV Etah and cluster level Badminton Meet held at JNV Hathras (UP)