# DISHANT BANGA

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# Education

University of North Carolina, Charlotte |Master of Science in Engineering Management (Analytics) GPA: 3.80 December ‘18

GGSIPU, India | Bachelor of Engineering (Mechanical and Automation Engineering) GPA: 3.60 May ‘14

# Technical Skills

**Analytics Tools** **:** Python, SAS, Azure ML Studio, Azure VMs, MS Excel, SQL, Snowflake  
**Visualization Tools** **:** Tableau, MS Excel , Power BI

**Statistical Modelling :** Hypothesis testing, A/B testing, ANOVA, Statistics, Experimental design

**Machine Learning :** Linear Regression, tree-based models, time-series Forecasting, Random forest, SVM, Clustering, Logistic regression, Gradient Boosting, Principal Components Analysis, Linear Discriminant Analysis

# Work Experience

***Bridgetree, USA***

**Sr. Statistical Analyst *Feb 2021- Present***

* Propose, design, build, and implement analytical solutions, including targeting strategies, segmentation schemes, campaign analyses, reporting, and predictive modeling and provide valuable business assistance across various clients.
* Cleanse, integrate, and compile data from multiple sources - Build & Manage multiple databases efficiently so that marketing campaigns become easier.
* Work on various data requests like Mail/Email Campaign Response Analysis to provide accurate and complete files and reports.
* Analyze data and build various reports efficiently using different business intelligence and reporting tools.
* Respond to various data requests like building waterfall and customer profile reports, Mail/Email Campaign Response Analysis
* Work on high priority projects which require advanced technical knowledge and advanced skills with SAS, SQL, Excel or other software packages.
* Set up and maintain automated Data Processing tasks.
* Monitor project progress and ensure on-time delivery of the project with high-levels of quality and insights.
* Be competent in Code Review, Coding Standards, and Best Practice Sharing.
* Serve as the technical lead for our high priority clients on translating Client needs into analytic insights
* Build data science models for customer clustering and customer propensity using Python or other software packages.

**Statistical Analyst *April 2019- Jan 2021***

* Analyze data on a weekly/monthly basis for campaign analysis to track trends in efficiency KPIs in terms of Incremental and ROI.
* Analyzing data to build various reports and determine the potential areas which should be targeted for acquiring new customers.
* Responsible for building and automating visualization dashboards to help clients to understand the performance and make decisions.
* Tools: SAS, Python, Tableau, Microsoft Azure (Machine Learning Studio, Azure VMs), SQL, Snowflake

***Accenture, India***

**Application Development Analyst *June 2016 – Jan 2017***

* Responsible for collecting, compiling, and analyzing data from several sources into system for Procure to Pay process for one of the global clients
* Single-handed manage Service Level Agreements, Data analysis, reporting and data management during month-end and year-end activities and recognized as the team’s fastest Request for Change resolver.
* Implemented strategies to adhere business goals and requirements using analytical practice and reduced ticket count by 35%.
* Hands-on experience with business processes flows, identifying & analyzing risks using appropriate analytics tools.
* Handled issues related to jobs, trintech and Ariba interface, FI-CO reconciliation, payments etc.
* Analyzing data using data visualizations to answer business questions and drive strategic direction

**Application Development Analyst *Jan 2015 – May 2016***

* Worked on categorization of support tickets using clustering methods to reduce ticket count.
* Gathered requirements for root cause analysis, proof of concepts, client presentations, approach documents and analytical support.
* Responsible for processing requirements, monitoring performance, managing tickets, and assisting end users as needed.
* Experienced with business process flow, identifying & analyzing risks using appropriate analytical techniques
* Performed data analysis, reporting, and provided support during month-end and year-end activities.

PUBLICATIONS

**Data-driven short-term natural gas demand forecasting with machine learning techniques**

* Proposed and build prediction models for seasonal gas consumption prediction and for hourly gas consumption prediction.
* The methodology presents a holistic approach that includes data pre-processing, feature engineering, feature selection, model development, and post-processing.
* Secured 4th position at N-Power gas consumption Forecasting Global Challenge 2018 with Mean Absolute % Error (MAPE) of 13.45%
* Link: <https://doi.org/10.1016/j.petrol.2021.108979>

**Optimization in initial inventory of Bicycle Sharing System, Institute of Industrial and System Engineers (IISE), 2019**

* Relocation of bicycles to improve utilization is major problem in managing the bicycles demand and supply. Suppose bicycles are repositioned after a prespecified planning horizon. The planning horizon is discretized by a trip period, in a single trip is assumed to be made. Given the demand rates of the trips in each period, the problem is concerned with maximizing the demand rate satisfied and minimizing the repositioned effort. The problem is formulated as a mix integer program by introducing a bi-objective function
* Designed bi-objective optimization model to maximize the trips made and minimize the relocation cost and determines the inventory level of bikes when the system is initialized after relocation.
* Link: <https://eventscribe.com/2019/IISE/fsPopup.asp?Mode=presInfo&PresentationID=542704>

Awards and Recognition

**2nd position at University Fintech Hackathon 2018 organized by Carolina Fintech Hub:**

* Secured 2nd rank among 150+ participants from 8 different schools in University Fintech Hackathon organized by CFH
* Challenge was to use technology for enhancing personalization for the customers in the current Banking industry.
* We build an AI-powered Complaint Handling system using which customer register their complaints using text messages and get treated accordingly using machine learning Natural Language processing techniques. that could automatically handle customer complaints by eliminating the need of complaint takers, using which the Bank can invest more in Complaint Solvers.
* Also, built Logistic regression and Random Forest classification predictive model to predict if the customer is a valued customer or not.
* Statistical analysis in identify most significant features using p-value significance tests influencing customer complaints.
* Presentation video:  demo of the product (AI Powered Customer Complaint Handling System) on this link: <https://www.youtube.com/watch?v=FmCAhxRG4ag&feature=youtu.be>

**15th position at BIGDEAL Forecasting Global challenge 2018:**

* BigDEAL at UNC Charlotte organizes forecasting competition called BFcom 2018. The competition was divided into two parts: Qualifying match, where the task was to build the model to find how many and which Weather stations should be used to predict the load consumption and Final match, where the task was to predict the probability of each hour being the peak hour of the day. My team and I, Waves of the future secured rank 11th in the Qualifying match and rank 15th in the final match among 142 data scientists, 81 teams participated from 26 different countries.
* Built Logistic regression, Random Forest, and Gradient boosting models to predict the probability of each hour to be peak hour of the day for load consumption.

**nPower forecasting challenge 2018**

* RWE nPower- one of the largest gas and electricity suppliers in the United Kingdom organized a forecasting challenge to forecast the Natural gas consumption of an unknown location in the UK. Around 18 teams from all over the world participated in the competition.
* The task consisted of three rounds of 6-months ahead forecasts, with the aim of minimizing the total Mean Absolute % Error (MAPE). I secured 4th Rank for outside UK region with 13.45% MAPE

**nPower forecasting challenge 2017:**

* RWE nPower- one of the largest gas and electricity suppliers in the United Kingdom organized a forecasting challenge to forecast the energy consumption of an unknown location in the UK. Around 40 teams from all over the world participated in the competition.
* The task consisted of three rounds of 6-months ahead forecasts, with the aim of minimizing the total Mean Absolute % Error (MAPE). This competition was a good opportunity to put my forecasting and analytical skills. I secured Rank 18 overall and Rank 1 in round 3 globally with 12.65% and 4.65% MAPE respectively