

# Sai Deepthi Penchala Sesha Gudimella

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## EDUCATION

### Oakland University

#### Master of Science in Information Technology Management (MSITM)

Rochester Hills, Michigan

(Expected graduation April 2021)

- **Major in Business Analytics** - GPA: 3.97
- Graduate Research Assistant
- Internship - BorgWarner Inc.

### CMR Institute of Technology

#### Bachelor of Engineering in Electronics & Communication – GPA : 3.62

Bangalore, India

Sep 2011 - June 2015

## SKILLS

- Programming Languages: SQL, R, Python, Java, SAS
- Analytical skills: Data Preprocessing, Data Analysis, Data Visualization, Data Modeling, Predictive Analysis, Spreadsheet Modeling, Reporting, Querying, Data Warehouse, Data Mining, Machine Learning, ETL, Statistical Analysis
- Analytical tools: Qlik Sense, Power BI, Tableau, Excel (Solver, Goal Seek, Data Tables, Data Analysis Tool Pak, VBA), JMP, Big Data Hadoop, Hive, Impala, Palisade-@Risk, Precision Tree, Stat Tools, Google Analytics, A/B Testing, Google Tag Manager, Hot Jar, SAS
- Databases: SQL Server (SSIS, SSAS, SSRS), MS Access, MySQL, Oracle
- Other Tools & Technologies: SAP Security, Visual Studio, MS Project, ERDPlus, SharePoint, SVN, GitHub, JIRA, Microsoft Outlook, Teams
- Frameworks: Hibernate, Spark
- Build tools: Apache Tomcat, Maven

## PROJECTS

### IT Survey Dashboard

Nov 2020 – Jan 2021

- Analyzed requirements and preprocessed data of annual IT Survey
- Integrating the survey results of BorgWarner and Delphi Technologies IT Surveys
- Converted data into actionable insights by developing dashboard with visualizations and reports
- Tested the application on UAT and moved it to the production server

### NBA Data Analysis using R and Python

Sep 2020 – Dec 2020

- Performed data cleaning, integration, and transformation of raw data for easy access and analysis using R
- Used descriptive statistics to understand data and to find correlation between various predictor variables
- Exploratory data analysis has been performed on the data using various Python libraries such as matplotlib and seaborn
- Used Python for data modelling and implemented different data science models such as Linear Regression, Logistic Regression, Random Forest, and Decision Tree
- Compared these models on training and test set and found the best model that fits the data

### Traffic Sign Classification using Convolution Neural Network

Sep 2020 – Dec 2020

- Developed a Convolutional Neural Network that reads traffic sign images and classifies them correctly
- Used Seaborn and Matplotlib packages for Exploratory Data Analysis in Python
- Performed Hyperparameter tuning to find the optimal number of layers and neurons, batch size and dropout rate
- Compared the models using validation data and made final predictions on the test data
- Finally implemented a Flask application for this traffic sign classifier that can be used as a web or mobile application in autonomous vehicles that can help drivers in reducing accidents

### New Car Sales in Norway

Sep 2020 – Dec 2020

- Aim: To analyze the new car sales in Norway and building a model that fits the data well and checks how accurately the model predicts the future forecasts using SAS code
- Performed data cleaning of raw data and imputed missing values using various Excel functions such as TRIM, Mean etc.
- Used summary statistics to find the measures of central tendency of the target variable
- Exploratory data analysis has been performed based on time series and ACF plot in SAS Studio
- Implemented various models such as Holt's and Damped trend exponential smoothing, Multiple Linear Regression and ARIMA models to fit the training data and predicted the car sales based on test data

### Census Data

Jan 2020 – Apr 2020

- Aim: To analyze the census data in multiple areas such as Demographics, Economics, Families, Housing and Social for all the states and counties in the US using VBA code
- Performed data cleaning of raw data and imputed missing values using JMP software and transformed data using Excel tools
- Developed applications that allow the user to view Demographics, Income, Means of Transport, Ethnicity of population etc. of a chosen state and its counties using VBA code
- Displayed dynamic charts of the data for various years using Excel
- Used Power BI for Data visualization to analyze the data more interactively

#### **Loan prediction based on Dollar amount**

Jan 2020 – Apr 2020

- Aim: To analyze if the loan would be approved for a customer based on various attributes such as Gender, Marital Status, Applicant and Co-applicant Income, Education Level, Credit History and Loan Term using modeling techniques in JMP
- Preprocessed data handled missing values and data inconsistencies using imputation technique
- Explored data utilizing statistical and graph analysis and verified if Principal Component Analysis (PCA) can be used to reduce dimensions
- Employed different data mining models like Multiple Linear Regression, Logistic Regression, Decision Tree and K Nearest Neighbors(KNN) on the training data
- Compared the models using validation data and made final predictions on the test data

#### **Designed Retail store Data Warehouse to analyze sales**

Jan 2020 – Apr 2020

- Designed Star schema, performed ETL to create and load the Data Warehouse using SSIS
- Used SSAS for creating cubes and SSRS to build reports to view and analyze the sales per Product Category for each State in the USA and Revenue for each state month wise
- Created a data mining model with the Association Rules algorithm. Performed Market Basket Analysis for the various products available in the Retail store
- Analyzed the Association rules to see which two products are frequently bought together to improve sales
- Used Tableau to create a story and analyzed the Sales, Revenue and Quantity per product categories sold per season for better Interactive Visualization

### **INTERNSHIP**

June 2020 – Feb 2021

#### **BorgWarner Inc. - EBS IT Data Analyst & SAP Intern**

- Developed Qlik Sense applications with various KPI's using Qlik data load script, functions, extensions, master items etc. and creating interactive dashboards with charts, graphs, and reports
- Involved in the process of planning, executing, and deploying Qlik Sense application to production server ensuring data governance policies and coding standards
- Created budget walk charts that were used by the leadership team during the annual finance meetings
- Involved in requirement gathering, data collection, data exploration and preparation, analysis and documenting results of analysis assisting the executives with business decisions
- Performed administrative tasks such as creating reports and performing analysis supporting users around the globe for IT Budget process as part of IT Financial Management System
- Involved in SAP security tasks of creating and maintaining users, annual firefighter renewals, mitigating controls, admin delegation of workflows, etc.
- Enhanced business spreadsheets utilizing Excel - Pivot Table, VLOOKUP, conditional formatting, group/ungroup, cell locking and sheet protection, etc.
- Documented processes and creating presentations for business use and end user training
- Worked independently with users to define concepts under direction of managers

### **GRADUATE RESEARCH WORK**

Sep 2019 – Apr 2020

- Assisted professor with Research on USPTO (United States Patent and Trademark Office)
- Acquired the patents that were assigned to all the National Laboratories, found the future citations and the inventor details for each of those patents to understand the flow of patent information around the world using SQL queries and JOINS
- Introduced the indexing concept while creating the database to ensure faster retrieval of data from a database containing 96 million records. About 10-15 tables had to be combined to get the required information for the analysis of patents and hence SQL query had been optimized for better results

## **PREVIOUS WORK EXPERIENCE**

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**Tata Consultancy Services Limited, Hyderabad, India**

Oct 2017 – Jul 2019

Senior Process Associate, Client - Bank of America

- Experience working in a banking domain and agile methodology and proficient in Big Data Technologies - Hive, Impala and Spark
- Worked with HaaS (Hadoop as a Service) teams to certify the on boarding applications/tools/software on HaaS platform, providing support for on boarding a new cluster in Haas Dev/Prod environments
- Performed various types of testing at OS, Platform, tool and at Cluster level like benchmark, volume, capacity, and regression
- Worked with the Architecture team to write Pig scripts in order to improve the performance of the cluster during an Upgrade

**Subex Limited, Bangalore, India**

Jul 2015 - Jun 2017

Software Engineer, Client – Telstra Limited

- Experience in design and development for telecom Business Support Systems (BSS) solutions with good knowledge in Java, Oracle-SQL, interconnect billing and network routing domain
- Designed & developed user interfaces and server-side code to intranet applications using Core Java, Hibernate Framework and Apache Tomcat Technologies
- Communicated with internal/external clients to determine specific requirements; Conducted reviews of code & testcases and analyzed change requests/enhancements
- Completed product development as per requirements, schedules, and activities; contributed to team meetings, handled troubleshooting of development and production problems across multiple environments

## **LEADERSHIP AND COMMUNITY ENGAGEMENT**

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**Tata Consultancy Services Limited**

- Engagement Team: Conducted fun activities, quizzes and knowledge sessions for a group of 60 members weekly

**CMR Institute of Technology**

- Class Representative: Volunteered as a peer facilitator and class leader for three consecutive semester's