

# SWATHI S

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## SUMMARY OF QUALIFICATIONS

- ✦ **Data Analyst/Business Intelligence Developer** with **4.5** years of experience in Data Mining , Statistical modeling, Machine Learning and Data Visualization.
- ✦ Actively involved in all phases of **Data Science project life cycle** including Data Preparation and Pre Processing, Data Manipulation, Feature Engineering, Statistical Modelling, Training and Testing, Validation ,Visualization and Reporting.
- ✦ Experience with statistical programming languages such as **Python** and **R**.
- ✦ Proficient in **Machine learning algorithms** like Linear Regression, K-Nearest Neighbors, Logistic Regression, Support Vector Machine, Decision Tree,C5.0, Random Forests ,Linear Regression and more Ensemble methods like Bagging, Boosting, Stacking.
- ✦ Extensive knowledge in building models with Deep Learning frameworks like **Tensor Flow** and **Keras**.
- ✦ Performed multiple Data Mining techniques like **Classification, Regression, Clustering, Outlier detection** and derived new insights from the data during exploratory analysis.
- ✦ Excellent performance in Model Validation and Model Tuning with Model selection, **K-fold cross-validation**, Hold-Out Scheme and Hyperparameter tuning by Grid search.
- ✦ Hands on experience with Python (2.x, 3.x) and its libraries such as **NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn**.
- ✦ Experience in using cloud services Amazon Web Services (AWS) including S3 and EMR.
- ✦ Good at Data Warehouse Techniques, Dimensional Modelling, Star and Snowflake schema.
- ✦ Proficient in Data Analysis with sound knowledge in extraction of data from various database sources like **MySQL, MSSQL, Oracle** and other database systems.
- ✦ Developed Merge jobs in **Python** to extract and load data into MSSQL and Oracle databases.
- ✦ Experience in creating **Time Series Analysis** in **R** using Regression Modelling.
- ✦ In depth knowledge in **Caret, DPYLR** and **ggplot2** libraries in **R**
- ✦ Involve Good Experience at creating User Groups, Assigning User Permissions and Sharing Dashboards/reports over Tableau Online/Server to target User Groups
- ✦ Responsible for writing **SQL** Queries, Dynamic-queries, sub-queries and complex joins for generating Complex Stored Procedures, User-defined Functions and Views.
- ✦ Extensive experience in **Tableau** Desktop in various versions of Tableau.
- ✦ In-depth knowledge in **MicroStrategy** in generating visualization for deep analytical insights.
- ✦ Hands on experience with all phases of Software Development Lifecycle (**SDLC**) and **agile** methodologies
- ✦ Fully authorized to work in the United States without sponsorship.

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## TECHNICAL SKILLS

DB Languages:	SQL, T-SQL,NoSQL
DS Languages:	Python, R
Databases:	Oracle, MS SQL Server,Teradata, MySQL,MongoDB
BI Tools:	Tableau, MicroStrategy
Platforms:	Unix, Windows
Cloud Services:	Amazon Web Services (AWS) S3, EMR,

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## EDUCATION

UNIVERSITY OF TEXAS AT AUSTIN, Texas

**Certification in Data Analytics** (Currently Enrolled, 2018-2019)

VELLORE INSTITUTE OF TECHNOLOGY, Vellore, India

**M.S in Software Engineering**

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## Key Projects

**Cognizant Technology Solutions**

**Nov 2013- Apr 2015**

***Data Analyst(Retail and hospitality)***

The goal of the project was to support sales and marketing team by building machine learning models and providing data analysis on sales and formulating better marketing strategy to help the business plan for the future to be better prepared to meet demands of the customers and maximize profits.

- ★ Collaborated with data engineers and operation team to implement ETL process, wrote and optimized **SQL** queries to perform **data extraction** to fit the analytical requirements.
- ★ Worked on data cleaning and ensured data quality, consistency, integrity using **Pandas**, **NumPy**.
- ★ Performed data computation using Scikit-learn package in Python
- ★ Participated in **features engineering** such as feature generating, PCA, feature normalization and label encoding, one hot encoding with **Scikit-learn** preprocessing.
- ★ Generated multiple algorithms such as KNN, Random Forest, C5.0, Decision Trees to identify the best fit model.
- ★ Performed **Ensemble Learning** to generate high Accuracy and Kappa for Classification and excellent **R-squared** and low **RMSE** for regression problems.
- ★ Performed **K fold** cross validation to regenerate random sampling for training and testing the data
- ★ Worked on creating the Entity resolution tables with ODM (on-Device Management) **data** for business teams using **AWS (EMR and S3)** and Python
- ★ Built **Tableau** visualizations by connecting to various Data Sources Relational Databases (Oracle, SQL Server) hosted on **AWS** environment.
- ★ Developed Ad-hoc reports using **Tableau** Desktop using data from Excel files and Databases.
- ★ Performed Data Analysis and **Data validation** by writing complex SQL queries against the SQL Server database.
- ★ Wrote queries to fetch data from different table by using JOINS, Sub-queries, Correlated sub-queries and derived tables on SQL Server Platform
- ★ Developed interactive Dashboards regarding Job Trends for Senior Management Using **Visualizations** like Dual Axis Bar Graphs, Donut Charts, Histogram and Waterfall charts in **Tableau**.
- ★ Collaborated with functional teams to ensure effective testing and minimal issues post implementation

***Data Analyst(Health Care)***

The project aimed at identifying the KPI's for integrating data from multiple sources and generating reports for both internal stakeholders and health partners to better understand the business related to automations within the Finance, Claims, Underwriting and Risk Management departments.

- ✦ Extracted and loaded data using **Python** scripts and SQL packages.
- ✦ Wrote **Python** scripts to parse XML documents and load the data in database.
- ✦ Used Python scripts to extract weekly information to provide regular information to the client.
- ✦ Developed Python scripts to clean the raw data and for **data preprocessing**.
- ✦ Acquired data from primary or secondary data sources and maintain databases/data systems
- ✦ Identified, analyzed, and interpreted trends or patterns in complex data sets
- ✦ Defined, designed and developed complex/nested **SQL** queries or extracts for dashboards.
- ✦ Wrote complex **SQL** queries using advanced SQL concepts like aggregate functions, Group By and OLAP (Online Analytical Functions).
- ✦ Designed and Optimized Data Connections, Data Extracts, Schedules for Background Tasks and Incremental Refresh for the weekly and monthly dashboard reports on Tableau Server.
- ✦ Developed Merge jobs in **Python** to extract and load data into MSSQL and Oracle databases.
- ✦ Developed interactive **Dashboards** using Visualizations like Dual Axis Bar Graphs, Bar charts and Scatter Plots using **Tableau**.
- ✦ Established standards and best practices for dashboards and project documentation.
- ✦ Developed **ad-hoc** reports to help the client understand the KPI's and the results .
- ✦ Scheduled **jobs** in Tableau server to automatically send reports to the clients on a weekly basis.
- ✦ Responsible for creating **User Groups**, Assigning **User Permissions** and Sharing Dashboards/reports over Tableau Online/Server to target User Groups.

***Strategic Outsourcing Pvt Ltd*****Dec 2010- Apr 2011*****Intern(State Govt)***

The project aimed at generating deep analytical visualizations by using dashboard and documents to help the client with budgeting of various departments of the state and to show their profits and losses incurred every year.

- ✦ Prepared project plan by gathering/analyzing client input, updated business users regarding project status, analyzed requirements and designed project workflow
- ✦ Involved in regular scrum meetings
- ✦ Developed Dashboards and Documents using bubble chart, interactive bubble chart, heat map, gauge, microcharts and simple graphs using **MicroStrategy** 9.2.1.
- ✦ Enhanced and fine tuned the existing dashboards/reports.
- ✦ Performance tuned the reports that were executing for long time.
- ✦ Re-designed and updated the old reports to new format as per the business standards.
- ✦ Enhanced, updated and maintained the Views, Triggers, Cursors and Indexes.
- ✦ Created MSTR architect component: tables, attributes, facts from scratch.
- ✦ Created Intelligent Cubes and reports based on them.
- ✦ Created Drill Maps to drill up, down and across unrelated hierarchies in reports.
- ✦ Conducted unit testing for the developed reports using **SQL**