# SHWETA RAJARAM PATIL

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## EDUCATION

**Master of Science in Information Technology (Data Science)**   University of North Carolina, Charlotte | GPA: 3.8| May '18
**Bachelor of Engineering (Electronics & Telecommunications)**   University of Pune, India   | GPA: 3.9| May '13

## TECHNICAL SKILLS

**Programming**   : Python, R, HTML, CSS, SQL, XML, Tensorflow, Keras, Scikit-Learn, PySpark
**Databases**   : Oracle, MySQL, Teradata, IBM db2, NoSQL, Hive
**Visualization Tools**   : Tableau, MS Excel, Google Analytics, Google Data Studio, Gephi

## WORK EXPERIENCE

### *Greenlink Analytics, USA*
**Data Management Analyst**                                                         *December 2019 - Present*
**Key Responsibilities:**
- Performed data analysis, data cleaning and data processing before loading the data into a SQL database (**Python, SQL,** Google Cloud)
- Built a desktop app/utility which will allow to automatically process new files and load them to the SQL database. (Python, **Tkinter**, **requests**)

### *Duke Energy, USA*                                                         *April 2019 – Nov 2019*
**Data Scientist**

**Key Responsibilities:**
- **Propensity Modeling:** Used geographical and customer demographics to estimate the likelihood of a resident converting to a customer for different products and thereby support the marketing campaigns. (Python, **K-means** clustering + Elbow Method + **SSMS, SQL**).
- **Maintenance Optimization** of Wind Turbines: Used **autoencoders** for **anomaly detection** to predict faults/ failures in the gearboxes and then predicted "**time to failure**" for the components with anomalies using **LSTM**.
- **Asset Tagging:** Worked on **Optical Character Recognition** for Number plates, texts, and product tags using pretrained models like ALPR, SVHN and **Tesseract** - processed the recognized text to automate the mobile-app scanning for on-field technicians.
- Used **Natural Language Processing** (**Named Entity Recognition**) to extract rebate amounts from the contracts and store the rebate results to a database format.
- Built **Intent classification** Engine using **Artificial Neural Networks** and **TFIDF** for website to understand customers Q&A.
- Used **Retinanet** to perform object detection on analog meters and calculate readings in the power plants using machine learning and AI.

### *The Greenlink Group, USA*                                                         *July 2018 – March 2019*
**Data Scientist**

**Key Responsibilities:**
- **Predictive Modeling**: Implement **Multivariate Regression** to identify most significant features using p-value significance tests.
- **Forecasting, Deep Learning**: Incorporation of **Artificial Neural Networks (LSTM)** on the selected features by improving the accuracy of the ATHENIA model by introducing Stochastic **Gradient Descent** and **RMSE error calculations**. (*TensorFlow, Keras, Theano*)
- **Data Preprocessing:** Employed **Z-score** and **decimal-scaling Normalization** techniques to improve accuracy and reduce error to achieve better convergence of neural network model. (*Scikit-learn, pandas, matplotlib, seaborn, numpy*)
- **Data Mining:** Designing **MySQL** database from scratch and synthesizing data as per the needs, used different **Joins, triggers, Functions and Stored procedures** to merge big data sets for **Machine Learning** Modeling as per demand.
- **Tableau visualization** analysis on energy strategies and tease out insights pertaining to sustainability.
- Research, analysis and modeling to incorporate and interleave machine learning techniques for topics including energy, economics, water, and climate change.

### *Cognizant (Pune, India)*                                                         *Oct 2013 – Dec 2016*
**Associate | Test Analyst, SQL Analyst**
**Key Responsibilities:**
- Gather requirements and design of **data warehouse** and data mart entities, conducted cost benefit analysis using various **ETL** tools.
- Develop, maintain and upgrade reporting tools. Worked with **db2** tables and using **mainframes**.
- **Database** testing, Design and develop SSIS packages, store procedures, config files, tables, views, and functions; (**MySQL, SQL Server**)
- Hands-on experience in defining business processes flows, identifying & analyzing risks using appropriate templates & analysis tools (**Python, matplotlib, Tableau**)
- Proficient in analysis and development of complex ROI reports. (**Pivot tables, VLOOKUPs, Regression, matplotlib, pandas, ggplot2**)
- Harnessing business analytics techniques like **RFM** and **Decision trees** to apply the results for better business decisions. (**Python**)