

# Swapnil Cheerla

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## Data Analyst/Scientist

Highly motivated and analytical individual with solid commitment to solving complex problems and leveraging data to drive insights and business outcomes. Skilled in statistical analysis, predictive modeling, and data visualization; proficient in Python, R, SQL, and Tableau to present data in clear and concise manner. Expertise in leveraging various technologies and programming languages to extract, transform, and load (ETL) large volumes of data efficiently while analyzing complex data sets to uncover valuable insights and drive data-driven decision-making. Talent for designing and implementing complex machine learning algorithms and deep learning models also features engineering, data mining, and reducing data loss. Deft at translating complex technical concepts into actionable insights for non-technical stakeholders. Possess solid understanding of statistical methodologies, hypothesis testing, and machine learning algorithms. Proactive and life-long learner committed to staying up-to-date with emerging technologies and best practices in both data science and software development.

## Area of Expertise

- Programming & Coding
- Data Engineering
- Debugging & Testing
- Data Pipeline Management
- Regulatory Compliance
- Cross-Functional Collaboration
- Agile Methodologies
- Data Integration
- Data Visualization & Reporting
- Data Cleaning & Warehousing
- Machine Learning & Modelling
- Statistical Analysis

## Technical Proficiencies

Java, Python, C, SAS, MATLAB, Tableau, C++, R, Power BI, HTML, CSS, XML, SQL, AWS, Flask, JavaScript, GitHub, Spark, MS Excel, Spreadsheet

## Academic Experience

### Student (Masters in Data Science – University of Albany)

Aug 2021 - May 2023

Gaining comprehensive understanding of foundational theories and techniques in data science, including statistics, machine learning, data visualization, and data management. Incorporating knowledge of data science into real-world problems such as analyzing large datasets, developing predictive models, and creating interactive visualizations. Utilizing several tools and techniques to develop and execute data science projects from inception to completion, including problem formulation, data collection, preparation, modeling, analysis, and interpretation.

- Participated in UAlbany showcase and presented project of stock prediction with team members.
- Led housing project and received appreciation from professor by leveraging strong leadership and time management skills.

## Career Experience

### AIML Analytics, India

Mar 2020 – May 2021

Data Scientist Intern

Updated and enhanced local and metadata models to ensure data systems' accuracy, reliability, and ease of maintenance. Translated complex business needs into long-term solution data models to support organizations in streamlining operations and improving efficiency. Developed best practices for data coding to ensure consistency within system, resulting in improved data quality, fewer errors, and better decision-making. Reviewed modifications of existing systems for cross-compatibility, which ensured that the organization's data systems remained up-to-date and optimized.

- Employed different CNN architectures, including activation functions, pooling, and convolutional layers, resulting in significantly improved accuracy by 30%.

- Implemented data strategies and developed physical data models aligned with organization's objectives, to enhance data governance and better decision-making.
- Evaluated existing data systems and worked with development team to create conceptual data models and data flow to identify gaps and opportunities for improvement.

## Key Projects

### Housing Project

**Oct 2021 – Dec 2021**

- Executed Machine Learning Algorithms i.e., KNN and Random Forest Algorithms to predict house value with reduced error rate.
- Produced ocean proximity pie-chart to drive efficient output by rendering and visualizing data with bar graphs, scatter plots, and correlation heat maps.
- Predicted and estimated locations type according to customer's budget and allow customers to find right time to buy house, resulting in 96% accuracy.
- Played an integral role in discovering relationship between house values and features, increased efficiency and accuracy.
- Accomplished in integrating Power BI to create and build interactive dashboards and reports to analyze data more effectively.
- Deployed model using AWS Elastic Beanstalk to make it available online and accessible to clients.
- Tools: Python, Jupiter Notebook, Power BI, AWS Elastic Beanstalk

### Calorie Counter Using Python

**May 2021 – June 2021**

- Designed and developed Health tracking system device to measure individual's health activity in analog manner using analog scales and thermometers.
- Developed calorie estimation architecture, object counting algorithm for food portion recognition, CNN handles training, and testing of top layers with accuracy of 91%.
- Improved accuracy in counting food calories and estimated Body Mass Index (BMI) as main components of web-system
- Tools: Python, Anaconda

### Online Loan Application and Tracking

**Jan 2021 – Feb 2021**

- Established an automated EMI Calculator tool for calculating EMI of various Loans in a web application.
- Developed and deployed web application to manage online loan transactions, using functions in Java, and session tracking to maintain state of end-user.
- Designed overview of system with help of Data-Flow Diagrams, 4+ Use case Diagrams, and used CODD rules for database management.
- Tools: Java, Servlets, HTML, CSS, My SQL, JDBC

### Online Attendance System

**Dec 2019 – Mar 2020**

- Designed and created online tools for school administration to monitor and manage students' attendance.
- Developed student attendance database using Oracle DB by implementing optimization techniques such as stored procedures, functions, views, and designing data models.
- Implemented statistical methods to generate weekly/monthly reports and graphs using student datasets from Malla Reddy Engineering College.
- Designed web application and ingested data from Tableau, resulting in a 50% increase in interface functionality.
- Tools: PHP, My SQL, Bootstrap, JavaScript, HTML, CSS, charts.js, Tableau

## Education

**Masters in Data Science** | University at Albany, Albany, NY, May 2023

**Bachelor in Computer Science and Engineering** | Malla Reddy Engineering College, Hyderabad, India, June 2021

### **Relevant Course Works:**

*Database Management Systems, Data Structure, Django, Cloud Computing, Data Analytics, Data Visualization, Algorithms, Operating Systems, Computer Networks, Big Data Analytics, Statistics, Stochastic Models, Machine Learning, Data Mining, Linear Algebra, Calculus*

## Licenses & Certifications

**Hacker Rank Skill Verification**, 2020

Achieved Digital Skill Certificate in Python, Java, SQL

**Python 3 Programming**-Coursera, 2020

Covered Python Data structures, Capstone: retrieving, processing, and visualizing data with Python and solving challenging problems.

**Python for Everybody**-Coursera, 2020 | Got familiarized with fundamentals of programming in Python.

**Machine Learning and Data Science with AWS**, 2023

Had gained Hands-on experience with Amazon Web services.