



Sankarasubramanian Swaminathan

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22-Aug-1991

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Indian

PROFILE

Master graduate with profound interest in Data Analytics. An ardent learner with proficiency in python and machine learning techniques. Keenly interested to work in developing innovative products and make valuable contributions to business decision making.

SKILLSET

Technical Skills		Soft Skills		Languages
o Data Analysis	o Python	o Team Collaboration	o German - Elementary	
o Data Visualization	o R	o Time Management	o English - Fluent	
o Machine Learning	o SQL	o Problem Solving	o Tamil - Native	
o Natural Language Processing	o Tableau	o Decision Making		

EDUCATION

M.Sc Distributed Systems Engineering

Oct'14 - Sep'18

Technische Universität Dresden, Dresden (Germany), Grade: 2,0

Emphasis: Systems Engineering, Real-time systems, Internet and Web Applications, Machine learning

B.E. Electronics And Communications Engineering

Aug'09 - May'13

Anna University, Chennai (India), Grade:7,26/10

Emphasis: Data Structures, Computer Architecture, Computer Networks, Embedded Systems

Project: Automated Response Assimilation System

Publication: Formal Verification of Safeness, Liveness and Fairness of a Hardware Application using OpenCL on Graphics Processing Unit

EXPERIENCE

Master Thesis - Machine Learning Approaches In Production

Apr'18 - Sep'18

Fraunhofer Institute of Production Technology, Aachen (Germany), Grade: 1,7

Tools & Technologies: Python, NumPy, Pandas, Scikit-Learn, Matplotlib, XGBoost

- o Applied machine learning techniques in two datasets representing predictive maintenance
- o Visualized data and identified factors impacting prediction of machine operational state
- o Handled the complexity of dimensionality and imbalanced data using PCA and SMOTE techniques
- o Compared different classification methods and achieved 95% accuracy of machine failure prediction
- o Cost-Sensitive approaches were used to find an optimal threshold for classifying the machine failure

T-Systems Multimedia Solutions GmbH, Dresden (Germany)

Tools & Technologies: Docker, Icinga, MySQL, InfluxDB, Grafana

- o Collaborated in implementation of a centralized monitoring system
- o Implemented secure connections for network components and system interfaces
- o Implemented monitoring visualizations in GUI for different service teams
- o Participated in Scrum-sprints and documented in Jira and Confluence

Programmer Analyst Trainee - Quality Engineering & Assurance

Sep'13 - Sep'14

Cognizant Technology Solutions, Chennai (India)

Tools & Technologies: SQL, HP Quicktest Professional

- o Interacted with clients for requirement analysis and built test case scenarios
- o Optimized SQL queries using complex joins to reduce data retrieval time
- o Database administration of insurance contracts using Oracle database



PROJECTS

Detroit Blight Violation - Prediction Of Blight Fines Compliance

- o Analysed the property owner's violation of maintenance to classify their compliance level for paying the fine issued by city of Detroit
- o Key Insights Derived - violators living out of state, court hearing judgement amount, court disposition and distance of property area from urban location attribute to lower compliance in paying fines
- o Applied feature engineering techniques to handle categorical variables and missing values
- o Implemented gradient boosted decision tree model and achieved 90% accuracy in identifying violators not paying fines for property maintenance violations

Quora Question Pairs - Duplicate Question Prediction

- o Analysed 1,00,000 question pairs from quora dataset to classify whether the questions pairs were duplicate
- o Identified and implemented feature constituting common word share patterns between question pairs
- o Converted text to word vectors for classification using word embeddings with spaCy library
- o Implemented and compared tree based learning models like XGBoost and LightGBM and achieved a log loss of 0.351



CERTIFICATIONS

- o [Introduction to Data Science in Python](#) - University of Michigan, Coursera
- o [Applied Machine Learning in Python](#) - University of Michigan, Coursera
- o [Microsoft Azure HDInsight Big Data Analyst Certification](#) - Microsoft, edX
- o [Introduction to Computer Science and Programming Using Python](#) - Massachusetts Institute of Technology, edX