VISHAL SARDA

github.com/Vishalks www.linkedin.com/in/vishal-sarda/ vishalks.github.io/

EDUCATION

Stony Brook University **Master of Science, Computer Science** **New York, USA**
CGPA- 3.76/4.0 **Expected Dec 2020**
Coursework: Analysis of Algorithms, Theory of Databases, Probability and Statistics for Data Scientists, Data Science Fundamentals, Introduction to Modern Cryptography, Human Computer Interaction, Smart Energy in the Information Age

College of Engineering Pune **Bachelor of Technology, Computer Engineering** **Pune, India**
CGPA- 8.44/10.0 **May 2016**
Coursework: Data Structures, Operating Systems, Software Engineering, Database Management System, Storage and Virtualisation, System Programming, Computer Networks, Graph Theory, Compiler Construction, Data Communication, Microprocessor Techniques

TECHNICAL SKILLS

Programming Languages: Java, C++, C, C#, Python, R, SQL, Typescript, Javascript , HTML/CSS
Frameworks and Libraries: REST, Maven, Spring, Struts, AngularJS, React, Tensorflow, Keras, scikit-learn, Kafka, JIRA, GIT, Swagger

PROFESSIONAL EXPERIENCE

MICROSOFT*, *Software Engineering Intern ***Redmond, USA*** ***May 2020 – Present***
- Building a Whiteboard tab application using C# and Typescript for Microsoft Teams having 75M daily active users.This application will provide a seamless user experience within Teams for collaboration and is expected to largely increase Microsoft Whiteboard usage.

PAYSAFE, Software Engineer ***Hyderabad, India*** ***Oct 2018 – July 2019***
- ***Merchant Management:*** Single-handedly conceptualised and built an entire user management workflow for the Unity Business Portal in Java using MySQL that included stages starting from first time login, change password to forgot password for new merchants.
- ***Merchant Onboarding:*** Improved the identity access management workflow by providing the functionality to assign pre-defined and custom roles and permissions to the users so that agents can onboard new merchants without any hassle and in very less time.
- Proactively provided product improvement suggestions and implemented various new features such as graphical representation of Authorization and Transactions, transaction drill-down and user favourites using Java, Kafka, MapR, Highcharts and AngularJS.
- ***Pro Bono Work:*** Took initiative to enforce best practices in Object Oriented Programming in Java. Actively participated in code review and contributed to improve overall codebase coverage using test driven development.

D.E. SHAW, Software Engineer ***Hyderabad, India*** ***July 2016 – Sept 2018***
ATS – Application Tracking System
- ***Application Management System (AMS):*** Worked on building the AMS as a part of the new ATS at the firm with a 50% decrease in the page load time through dynamic page loading using Java, MySQL, ReactJS which improved the overall job applicant experience.
- ***Recruitment Management System (RMS):*** Built the Interview Scheduling and Candidate Pipeline tools for the new RMS using Java, MySQL and ReactJS and Struts framework. These tools significantly reduced the manual effort involved in the entire candidate hiring cycle thus helping the Human Capital team to screen candidates in an organised manner and speed up the entire hiring process.

Payroll Workbench
- Automated various processes such as Deferred Compensation management, Payroll Reconciliation and Employee Contribution by building user interactive workflows and gadgets using Java, MySQL, DPortal, Javascript, Slickgrids, MyBatis and ReactJS.
- Debugged applications deployed in production, solved high-priority issues with extremely low turn-around time and mentored new hires.

ALGOANALYTICS, Research Project Intern ***Pune, India*** ***Dec 2015 – May 2016***
- Implemented an open-source **classifier** in R to classify patients suffering from brain disorders such as Schizophrenia and Dementia.
- Achieved an accuracy of 92% (Schizophrenia, 119,748 test cases, 2nd best in Kaggle) and 98% (Dementia, 336 total cases) using this binary classification tool by using SVM, Neural Networks and many other algorithms ensembled into one after feature selection.
- Combined Caret (R), Weka (Java) and Scikit Learn (Python) in one package to efficiently use the models according to the preference.

ADP, Software Development Intern ***Pune, India*** ***May 2015 – July 2015***
- Built a web application for Hiring Managers for tracking open positions at the firm as well as various candidacy stages like Resume Review, Resume Screening, Interviewed, etc in the form of dashboards and intuitive pie charts using Java and AngularJS.

PROJECTS

- ***Missing Data Imputation using Generative Adversarial Networks*** (ongoing): Building a Generative Adversarial Net (GAN) that accurately imputes missing data in categorical as well as numerical datasets as a part of my Masters' research project. The GAN network has been able to achieve an RMSE of 0.052 on UCI spam base dataset and 0.126 on UCI letter recognition dataset.
- ***Energy Disaggregation and Transfer Learning using Deep Learning:*** Built a neural network architecture that disaggregates individual appliance's electricity consumption from mains data using stacked ensemble learning. Built using Keras and consists of bidirectional GRU and LSTM at its core. Model trained on one appliance can also be used on other appliance through transfer learning.
- ***COVID-19 Data Analysis:*** Proposed and tested 5 hypotheses in Python such as Z-test, Chi-square, K-S, Permutation, Wald' test on the COVID-19 NY counties data. Predicted number of deaths through time-series prediction using EWMA and Auto-Regression.
- ***Retail Sales Data Analysis***: Performed an in-depth analysis on retail sales data consisting of about 17M rows and 60 features from Costello's Ace, a hardware firm in the USA. Provided valuable suggestions to the firm for increasing sales through time series analysis, market basket analysis and personalized product recommendations for customers. Helped in business expansion by suggesting potential locations to open new stores. Backed up all findings through visualisations using Tableau and Matplotlib.

PUBLICATION

- N. Borude, C. Maher, V. Sarda, A. Santra, **Generic Binary Classifier Tool For Diagnosis Of Patients Suffering From Brain Disorders In R using Machine Learning,** *IEEE CAST 2016,* **10.1109/CAST.2016.7914961**