Sourabh Agarwal

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EDUCATIONAL QUALIFICATION

Masters in Electronic and Business Technology (MEBT)

University of Ottawa Ottawa, Ontario, Canada August 2019 – April 2021

Bachelor of Technology in Software Engineering

SRM Institute of Science and Technology Chennai, IN

Graduation Date: May '17

CGPA: **8.978** /**10**

PROFESSIONAL EXPERIENCE

Statistics Canada August 2020 – Present

Data Scientist

Working as full-time employee, developing, and enhancing search engine for the organisation using modern technologies such as machine learning for natural language processing and gathering information through technique called web scraping. Also working on other projects handlings live data scripts, processing data storage into SQL databases and creating data visualization application. Therefore, created a web application in R using R-shiny framework to produce provincial level dashboard to capture live data and produce visualization in Realtime manner. I have created this application from scratch designing the architecture of tools and frameworks, database, etc. Using Azure cloud, I was able to store big data and scrape the information in Realtime.

University of Ottawa April 2020 - August 2020

Full-Stack Developer

Worked as intern developing university library using popular web stack PHP and MYSQL. I was assigned to develop new features for the website to enhance new functionalities and provide additional features. During development we also modified booking system to support library booking for the students during the pandemic time. Also, monitored, and deployed changes in the production.

Lemay Ai November 2019

Front-End Developer / Data Engineer

Worked as a part time intern frontend developer, utilising LARAVEL and VUE JS to develop a web-based platform to provide user with the options to interact with the system that help them to decide upon the laws and regulation even licensing required for their business that been handled by a machine learning agent, helping user to guide to right procedure for their business.

COGNIZANT November 2017 – May 2019

Programmer Analyst Trainee

Worked as a Full Stack Developer for developing application in banking sectors. Exposure to various tools like Eclipse, MYSQL, Angular, Java Spring and various front-end technologies. Worked under Agile environment to develop and deliver user stories assigned by scrum master. Cross Trained in various Internal Vertical Applications like Corporate System, Channel Services, Communication Gateway etc.

ACADEMIC PROJECTS

Developed Account Management Software using MATLAB

In this project we used MATLAB to formulate the user entries according to the different options like balancing the amount, calculating taxes, and many more functions and provided solutions in the form visual representations like graphs, etc.

Developed Software Design for Issue Tracking Management

In this project we basically followed the Software Development Lifecycle (SDLC) to take requirements from the stakeholders and customers and formulated SRS on the basis of it. After that we used Rational Rose and Argo-UML to construct the designs for the software like use cases, class diagram, state chart diagram, activity diagram, etc.

Developed IT Asset Management Portal

In this project we developed a web-based portal to manage the assets that are provided by an organization to their employees. This is made by using various web technologies like HTML, CSS, JavaScript, Servlet, Java Server Pages (JSP), Ajax, XML and more. The project is also developed using SDLC therefore designs was developed using UML designing tool and requirements were gathered to form the SRS.

Developed Major Project on Prediction Model for Customers Satisfaction for Restaurants Business Development and Revenue

In this project we developed a web-based portal to manage the customer retention for the restaurants using different offers for different customers based on their chance to come again or not. We used data mining for predicting customer habits and quality services through feedbacks provided by the customers. We followed the agile methodology and provided UML design throughout the project. Later on, this project was patented with the help of university to preserve it's concept and to provide guidance for researches to build on this project.

Developed Ecommerce Website: Throucery

Developed an online grocery service named "throucery" which simulates an e- commerce website where our algorithm can also suggest products and services to customers. Used a content management system (CMS) tool called "Joomla" to develop, manage and maintain quality among the websites. The website was integrated with MYSQL to receive user requests and maintain their records for order and provide rewards to the user for their loyalty to the system.

Developed Data Visualization: Tableau

Used several attributed datasets for the superstore and determined various valuable insights such as market predictions, performance of market sectors and annual profit revenue. Created a dynamic dashboard that helped to determine further outcomes for better marketing

Developed NLP based chat-bot

Used a NLP based approach to develop a software for medical recommendation system where users can provide any queries related to medical fields and the software will provide recommendation to their query. Approach was developed using deep learning approach and model was created using tensor flow to analyse different word and understand user query response.

Developed classification model to identify author and their books

Used a NLP based approach to identify the books with their author. In this project we gathered information from various books and processed the raw data to cleared and organised data using various techniques of data cleansing and then through word tokenising the 3 different model was trained to identify the books with their author and analysed for which model it was more accurate.

Developed Website for university for professional development club

Developed a website for university where students can apply for projects, internships and events that are currently going in university. The website is created using react framework with integration of MongoDB as database platform hosted using SSL certification. Through this website student can get additional information and resources ongoing in university.

JUSCO [Jamshedpur Utility and Services Company Limited]

Full Stack Developer

Gained practical as well as theoretical knowledge on development of full scale project using java tiles and MVC concept and followed the incremental model and appropriate software lifecycle stages to deliver the product.

Bharat Sanchar Nigam Limited (BSNL) - Jamshedpur

Telecommunication Engineer

June 2016

Training on **Advance Telecom Technologies** gave me an exposure to various telecom technologies used and its implications in our daily life. I learned more in-depth on essential functions of Telecom Switching System, PCM & its frame structure & in extent on optical fibre and the optical window.

RESEARCH PAPERWORK / PATENT

Presented a paper in the National Conference "Recent Innovations in Software Engineering & Computer Technologies" [NCRISECT 2017] on "Customer Satisfaction for restaurants based on parameters for business development and revenue".

Currently hold a patent titled as "A COMPUTER IMPLEMENTED SYSTEM FOR PREDICTING CUSTOMER SATISFACTION AND A METHOD THEREOF" – 2017841046148 filed by the SRM University, where myself as one of the authors for the patent.

TECHNICAL KNOWLEDGE/ SKILLS

Programming Language: C, C++, Java, SQL, HTML, CSS.

Scripting Language: Python, R, Basics of UNIX, JavaScript, Basics Windows Command Prompt.

Build Tools: Experience with Maven.

Front End Framework: Bootstrap, Angular JS, Angular, React.

Back End Framework: Java Spring, Servlets, PHP, JSP, JSON and MVC.

Version Control Tool: Experience with Git.

Database: Experience with MYSQL & Oracle, Mongo DB, Firebase.

UML Designing: Experience in Argo UML and Star UML [Open-Source Software]

Agile Tool: JIRA and Confluence.

Others: VS Code, Eclipse, Junit, Selenium, Docker, Jupyter, Data Bricks.

Machine Learning and Data Science: NLP, Supervised and Unsupervised machine learning algorithms.

Visualisation: Tableau and Power BI. CMS Tools: Joomla and WordPress. Cloud Tools: Microsoft Azure.

CERTIFICATIONS AND ACHIEVEMENTS

- Participated in Hackathon: CANDEV, hosted by the statistics of Canada.
- Attended workshop for Software Quality Management.
- Presented the paper on IEEE conference on Prediction Model for Customers Satisfaction for Restaurants Business Development and Revenue.
- Researched on Virtual Computers and Augmented Reality.
- Participated in National Level Hackathon code in India.

RELEVANT COURSEWORK / INTERESTS

- Data Structures, Computer Networks, DBMS
- Software Engineering, Software Architecture, Software Design, Software project management, Software Testing, Software Quality Assurance
- Agile Methodologies
- Machine Learning, Artificial Intelligence

June 2015