# ACADEMIC QUALIFICATION

Course Name	Institution	Year of Completion	Score
M. Tech – Data Science (Online)	BITS Pilani – WILP	2025	Yet to graduate (8.47)
B. Tech – Computer Science	VIT University – Chennai	2019	CGPA – 8.6

### WORK EXPERIENCE

- > <u>AdeptLabz</u> (Senior Software Engineer)
  - April 2023 Present
  - Peerlslands:
    - Implementation of several APIs, Scheduler services, Cron jobs, Auth services using JWTs in TypeScript using NestJS Framework.
    - > Development of MongoDB queries and aggregation pipelines. Experience on Mongoose as ODM.
    - Exposure / Experience on Microsoft Graph APIs, Azure Blobs and other third party integrations like MapBox, Twilio, SendGrid.
  - <u>Tata Communications Limited:</u>
    - Implementation of APIs in Java using SpringBoot Framework, that uses Hibernate framework as the ORM for MySQL.
    - > Development of test suites and unit test cases using JUnit and Mockito.
    - > Exposure to Flowable, RabbitMQ and Kibana for logs.
- > eShakti Pvt. Ltd. (SDE Software Development Engineer & Data Science ML Engineer)

September 2021 - March 2023

- Full stack development of both customer-facing pages and internal web tools using jQuery, AJAX, ASP .NET MVC, ASP .NET, Classic ASP, Entity Framework, ADO .NET, LINQ, OLEDB, ODBC.
- Development of different tools, APIs and software applications using Python and C# programming languages.
- Development of multiple relational database queries & stored procedures using SQL and Transact-SQL (procedural programming) Experience with DML, DDL & TCL.
- Implementation of Machine Learning regression models using scikit-learn to automate the pattern-making process by predicting the final pattern measurements with the help of customer inputs, product description and the available historical data to minimize the workforce and licensing costs in this customized fashion e-commerce space.
- Involvement in several other machine learning R&D projects which includes customer segmentation for rolling out customized offers, product classification to assign priority levels to determine the product listing order, etc...

#### > Shell India Markets Private Limited (Software Engineer - IT)

July 2019 - September 2021

- Development of scripts/programs using Selenium-Python to automate an entire document-distribution cycle in an EDMS (Electronic Document Management System) tool named Assai which would proactively help in saving several man hours of workforce and licensing costs of the tool.
- SharePoint Site development in both classic and modern UI which also includes development of SPFx applications using typescripts, use of C#.
- With respect to SharePoint, direct involvement in the decision of site architecture, libraries and documents management, setting up workflows, forms, etc., along with a few administrative tasks like access management.
- Minor involvement in different data analytics projects where Tableau and PowerBi are used for analysis, interpretation, and visualization.
- Involvement in R&D, developing a proof of concept (POC) for data extraction from different documents.
- Development of a few Excel macros using Excel-VBA scripts to manipulate data as per business requirements and to facilitate data extraction process for the purpose of data migration.

## **INTERNSHIPS**

#### → <u>RedBlackTree</u>

#### May 2018 - June 2018

Interned at RedBlackTree as a part organization's AdminiBot team, to build a complete OCR system using various image processing concepts and machine learning techniques to detect the contents of any given invoice image and hence to automatically segregate the textual content like the Company Name, price, etc...

### → Dr. Agarwal's Eye Hospital

## June 2017 - July 2017

Contributed majorly to every phase of a Software Development Life Cycle starting from requirements gathering, features suggestion and functionalities selection, road map building to ensuring of timely delivery along with testing for an EHR Software (Electronic Health Record) which was in the very initial developmental stage.

# SKILLS

PUBLICATIONS

- NestJS Framework with Mongoose as ODM for MongoDB
- ASP .NET & ASP .NET MVC with Entity Framework as ORM for SQL
- SpringBoot Framework with Hibernate as ORM for MySQL
- JUnit & Mockito for Test Frameworks
- APIs Development & Integration
- Scheduler Services, Cron Jobs & Auth Services using JWTs
- SQL Jobs, Queries & Stored Procedures
- MongoDB Queries & Aggregation Pipelines
- Machine Learning Regression, Classification & Clustering
- Image Processing & Computer Vision

- Python
- TypeScript
- C#
- JavaScript, jQuery, Ajax
- NoSQL MongoDB
- SQL & T-SQL
- LINQ Expressions
- Java
- Scikit-learn

# A research paper on 'Optical Character Recognition using Ensemble of SVM, MLP and Extra Trees Classifier' has been published in the IEEE INCET-2020 Conference (IEEE International Conference for Emerging Technology) which is included in the IEEE Xplore. (Link to Paper)

- A paper named 'Accident Detection and Number Plate Recognition using Image Processing and Machine Learning' has been published in the IJRTE journal (International Journal of Recent Technology and Engineering) under the Volume-8 Issue-5 which is indexed by Scopus. (Link to Paper)
- A paper named 'Automation in Agriculture Using IOT and Machine Learning' has been published in the IJITEE journal (International Journal of Innovative Technology and Exploring Engineering) under the Volume-8 Issue-8 which is indexed by Scopus. (Link to Paper)

# **CERTIFICATION & ONLINE COURSES**

- Microsoft Certified: Azure Fundamentals (<u>Link</u>): Certification on Azure from Microsoft - Helpful in understanding different cloud concepts and cloud services needed while developing projects on Azure and other cloud services.
- Algorithmic Toolbox (Link):
  A 6-weeks complete course on Algorithms offered by University of California, San Diego through Coursera
- Programming in Go (Link): A 3-courses 12-weeks specialization program on GoLang offered by University of California, Irvine through Coursera.

# **PROJECTS DURING GRADUATION**

# Cricket Match Win Predictor (Web Mining)

A program (in Python language) or an application (with UI - Tkinter) that predicts the percentage of victory of any team in a cricket match by scraping on its own, the statistics of the players from the web.

# House Price Prediction - Machine Learning - Kaggle problem

A regression problem to predict the price of a house which has more than 180 attributes to learn. Used different ML techniques - XGB, Lasso Regression, Random Forest, Linear Regression. Secured a Kaggle rank of 216 (was ranked in the top 10%) during the time of submission.

# Sentimental Analysis (Social and Information Networks)

Program (in R programming language) that retrieves tweets from Twitter (using twitteR package) on any generic topic and categorizes them into tweets that are in favour or against by analyzing the lexicons and emoticons in them.

# Driving License Test Automation - IOT Project

An IOT project that automates the Driving License Test process by analyzing the motion of the car (parking,inclined plane,driving an eight) using many components like Ultrasound sensor, Light detector, ESP8266 Module, Arduino interface, etc..

Accident Detection and Number Plate Recognition (Image Processing & Machine Learning)

A project that uses different image processing and machine learning techniques to detect the car and hence the number plate if any collision or accident is detected.

# Development of a basic Compiler (TOC and Compiler Design)

A simple compiler/translator built on top of D3 math JS (using Scalable Vector Graphics - SVG) to plot the graph of any mathematical function taken as input from the user by using the concepts of lexical analysis, semantic analysis and code generation.

 Predicting the Valence of a Scene from Observers' Eye Movements (Content Based Image Retrieval & Machine Learning)

Worked on the standard journal paper 'Predicting the Valence of a Scene from Observers' Eye Movements' and improved its accuracy to great extent compared with the original paper.

# Railway Reservation Management (Internet and Web Programming & DBMS)

A web application that helps users to reserve tickets for any particular train. This uses both client-side (HTML,JavaScript,CSS) and server-side (PHP) scripting languages and also connects to the database to achieve the same.

# Sign Language Recognition (Image Processing & Machine Learning)

A Python application or program that first separates the human hand from the background and then computes different image descriptors which are pushed into a trained ML model to predict the meaning of that particular hand-sign.

# **CERTIFICATE OF APPRECIATION – DURING GRADUATION**

- Awarded with a Certificate of Appreciation for topping in Advanced C++ exams organized by the GNU/Linux User Group and ACM Student Chapter in association with Spoken Tutorial Team of IIT Bombay.
- Awarded with a Certificate of Appreciation along with a cash prize for meritorious performance and excelling in the quiz conducted at the end of a Python workshop.
- Secured second place for coding and executing a Hangman game in a Tech-Learning Competition.