ADITYA AGARWAL

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EDUCATION

Bachelors in Computer Science and Engineering GPA- (2.6/4.0) **Aug 2017- Jul 2021**
Alliance University, Bangalore

EXPERIENCE

***Back-end Intern*, Quichub Innovations LLP, Bangalore** **Sep 2020 – Nov 2020**

Quichub is a technology company offering consumer health solutions.

- Developed 'MyResQR' - an emergency response platform to use if a certain individual met an accident.
- Programmed an SOS button that sends alerts to the user's emergency contacts; Built services using Python in Django Web Framework.
- Implemented IVR call flows using Exotel API for automated calling and text messaging to automatically connect the victim or the respondent to the emergency contact.

***Research Intern*, National Institute of Technology, Rourkela** **Jun 2019- Jul 2019**

NIT Rourkela is a University of National Importance for technical education in India.

- Learned and worked upon the recommendation algorithms in Python for collaborative filtering over Netflix Movie Database.
- Performed Collaborative filtering algorithm on movie dataset for learning and prediction for user recommendation.

TECHNICAL SKILLS

Operating Systems: Windows, Ubuntu (GUI and CLI), macOS
Languages: Python, Core Java
Database and Client/Server Technologies: MySQL, SQLite, Amazon RDS
Web Applications: HTML5, JavaScript, CSS, Bootstrap
Others: TensorFlow, NLP, Regression Analysis, Convolutions, AWS (EC2, EBS), Docker, Flask web framework, Django

RELEVANT PROJECTS

Object Classifier from Images **Aug 2021 - Sep 2021**

- Created an Image Classifier to classify Images among 6 classes using TensorFlow 2 framework.
- Programmed a CNN with 24 deep layers with 150,534 Trainable parameters out of 20,174,918 Total parameters.
- Obtained accuracy of 96.3% on the training set and validation accuracy of 59.3%.

Django Contact Record API **Aug 2021**

- Created an API using Django Rest Framework that performs CRUD operations.
- Designed a global database that stores a user's contact information and serves as a central repository to get information about an unknown contact.
- All API calls use token Authentication, to maintain the legitimacy of the data on the database.

Fantastic Computing Machine **Dec 2020 - Present**

- Created a SaaS Platform on *Python* using *Flask framework* to dynamically deploy Machine Learning Models.
- Teamed with two friends and managed the development of the platform.
- Provide users with a sharable link for the community to interact with the model.
- Implemented version control for the users to manage and maintain the previous models.
- Deployed the platform on AWS EC2 using dockerized Nginx and the platform.
- Using the Google OAuth service, I designed an end-to-end user authentication mechanism and saved the data in a session.
- Created a SQL database to hold user information as well as the projects that each user is assigned to.

Portfolio Website **Sep 2020**

- Designed a portfolio using Flask Framework and HTML and CSS.
- Created an easy contact form using *slack messaging API*.
- Deployed the website at Heroku at www.adityaagarwal.me.

Human and Horses Binary Classifier **Jul 2020**

- Created an image classifier using 3-layer Deep CNN, along with 3 pairs of Convolution and Pooling layers which can classify whether a given image is a horse or a human.
- Achieved 98% accuracy on the training set and 88% on the validation set.

Fashion Object Classifier: MNIST Data **Jul 2020**

- Fashioned an image Classifier using 2-layer Deep CNN which can classify a set of images into 10 different fashion items (such as shirt, trousers, boots etc.)
- Achieved 94% accuracy on the classification of the given unknown dataset.

Linear Regression Analysis on Diabetes Dataset **Apr 2020**

- For 442 diabetes patients, ten baseline data such as age, sex, body mass index, and so on were obtained to perform a quantitative measure of diabetes development one year from baseline.
- Trained and predicted the presence of diabetes via a linear regression model.
- Successfully predicted the disease progression, one year after baseline.

Sentiment Analysis using Scikit-Learn **Apr 2020**

- Deployed a *logistic regression* estimator from scikit-learn for sentiment analysis of IMDB movie reviews and document classification.
- Classified the movie review as a positive or a negative, using Bayes Theorem and Laplacian Smoothing.

Movie Recommender **Mar 2020**

- Formulated a movie recommender using *Tableau* train Movie-Lens Dataset for the user-item recommendation.
- Capacitated recommender classification of the movies based on genre and year and suggest the movies to the user.

Assistant Bot **Apr 2019**

- Created a CLI-based Assistant bot using Python which can be used for weather, crack jokes, list out fun facts.
- Enabled partial control over the host's windows computer by modifying and running DOS batch files.

COURSEWORK TAKEN: Scripting Languages, Data Mining and Data Warehousing, Database Management, Data Structures and Algorithms, Engineering Mathematics, Big Data Analysis

TECHNICAL CERTIFICATIONS/PUBLICATIONS/PAPERS:

- Contributed a book chapter entitled "Text Mining Approach Based on TF-IDF and SVM for Text Classification" for the book **Latest Innovation for Future Education** (LIFE-2021) published by ESN Publications- **Jan 2021- ISBN:** 978-81-947019-0-3.
- Introduction to TensorFlow for AI, ML, and Deep Learning- Coursera (deeplearning.ai), **Jun 2020**
- Structuring Machine Learning Projects- Coursera (deeplearning.ai), **May 2020**
- Python Data Structures- Coursera (deeplearning.ai), **May 2020**
- Data Visualization- Coursera (University of Illinois at Urbana-Champaign), May 2020
- Data Warehouse Concepts, Design and Data Integration- Coursera (University of Colorado), May 2020
- Java Programming: Solving Problems with Software- Coursera (Duke University), May 2020
- Neural Networks and Deep Learning- Coursera (deeplearning.ai), **Apr 2020**
- Machine Learning for All- Coursera (University of London), **Apr 2020**
- Presented a descriptive analysis on the Topic "Lung Cancer Detection using Machine Learning" at Present Around the World (PATW) competition hosted by the IET, at State Level (Karnataka Level)- **Feb 2020**
- Software-Defined Storage Concepts, VMWare, **Jan 2020**
- Presented the project," Light Following Solar Panel Assist " at interdisciplinary University Level Techno Fair 2018 and secured the 2nd position among 45 participants for Presenting an Innovative Idea- **Dec 2018**

ACTIVITIES AND AWARDS:

- Attended the Workshop APIs for Beginners organized by IEEE Computer's Society, Bangalore, **Jan 2021**
- Attended the Workshop Fundamentals of Image Processing using Python organized by CVM University, Gujarat**, May 2020**
- IEEE Student Member, **Aug 2019 - Jan 2020.**
- Participated and secured the First position in the "High Endurance, Glider Making" and "Hit the Target, Hydro Rocketry" competition in Astro Space Camp conducted by SSERD- **Nov 2017.**