TARUN CHITTA

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SUMMARY:

An enthusiastic and passionate Programmer, with interest and experience in Software Development, Big Data, Data Mining, Machine Learning, Object Oriented Programming and Deep Learning. Experienced in identifying and troubleshooting the root cause of issues.

ACADEMIC QUALIFICATIONS:

International Institute of Information Technology (IIIT) Naya Raipur, India   *Aug'17 - Present*
Bachelor of Technology in Computer Science   ***Current GPA:*** *8.95*

SKILLS:

Programming	: Python, R, C/C++, Java, SQL, Bash, MongoDB, MySQL, OOPS
Web Technologies	: HTML, CSS, JavaScript, PHP, D3.JS, Node JS, Flask, XML, JSON, Bootstrap
Big Data Technologies	: Apache Spark (PySpark), Hadoop
Tools	: Selenium, GitHub, Gitlab, Jira, Docker, Cronjob, Content Management System, Microsoft Power Apps, Microsoft Power BI, Asterisk, Apache2, Tableau
Operating System	: Windows, Linux, MacOS X

WORK EXPERIENCE:

Freelance Data Analyst @ **The Wine Group** *– Tracy, CA*   *June 2020 – Dec 2020*

- ***Customer Survey and Weekly Ad Analysis of Wine sales***
  - Data collection by scraping various online weekly ads from several stores and exported the data to .CSV format using Selenium and reverse engineering network calls.
  - Supported in the development of an app to record customer survey which is utilized by 300+ employees of the organization using Microsoft Power Apps.
  - Extracted results from the app in PDF format using HTML.
- ***Causal Impact Analysis of sales during COVID-19 pandemic***
  - Worked alongside Data Warehouse team and collected time series data from the past 2 years.
  - Performed Causal Impact Analysis on the same to find the impact of COVID-19 on the wine sales.
  - Analyzed and visualized the data to compare expected Vs. actual sales using plots generated by R.

Software Development Engineer Intern @ **CGNet Swara (Microsoft Research Funded)** *– Raipur, India*
April 2020 – June 2020

- ***Website Maintenance and optimization***
  - Developed a REST API for the organization and deployed it on a Linux Server using Flask and Apache2.
  - Optimized database design by eliminating anomalies to improve and upgrade its performance.
  - Updated the website by including search engine and social media plug-ins using JavaScript which resulted in increasing the followers of their social networking platforms from hundreds to thousands.
  - Process of data extraction is automatized from database-JSON-Google sheet on a 30-minute basis using Python and Cronjob.
- ***Peace Survey Campaign***
  - Designed an innovative Interactive Voice Response (IVR) Polling technology to store the responses of hundreds of rural people using Asterisk.
  - Streamlined a Python script to record responses of 3 different languages after each IVR call hangs up to store the responses effectively into a database.
  - Performed data analysis and visualized all the 3670 responses by creating plots using Python.

Research Assistant @ **MIT** *– Cambridge, MA*   *Oct 2018 – June 2020*

- ***Election Manipulation research***
  - One of the research projects at MIT which focuses on determining and mitigating the misinformation carried by the social media platforms.
  - Built five Data collection pipelines and interactive visualizers for social media platforms - WhatsApp, Share Chat, Tiktok, Telegram, Instagram by Reverse Engineering API calls.
  - Automated all the five data collection pipelines in a Linux server using Python, Bash and Screen tool.

- Used Google Reverse Image Search tool to obtain all the websites with the same or similar image and automated the whole process using Selenium.
- Worked on implementing a Machine Learning model for identifying fact-checked images based on the domains obtained from the reverse image search and achieved an accuracy of 96.5%.
- *COVID-19 Impact Observatory Research*
  - Research focusing understanding of people's baseline and resulting beliefs, behaviours, and norms with the impact of COVID-19.
  - Built three Data collection pipelines and interactive visualizers for social media platforms - WhatsApp, Telegram, Instagram by Reverse Engineering API calls.
  - Developed an online monitoring system using REST API with two end points and Documentation for programmatically accessing the data set.
  - Hosted the same on a Linux server, which results in obtaining CSV based of four input parameters with the summary statistics of the dataset.

ACADEMIC PROJECTS:

COVID-19 detection using Deep Learning   *Jun 2020 – Dec 2020*
- Classified X-ray images as Normal (or) COVID-19 positive based on features extracted through CNN.
- Used approximately 950 X-Ray images from IEEE's GitHub Repository as dataset.
- Trained a customized DarkNet model, **CovidNet19** with 17 convolution layers and 5 maxpool layers using traditional approach.
- Imposed transfer learning methodology on pre-trained models such as VGG 16, Inception V3 and Resnet and compared the performance for each of them.

Network Traffic Classification using Deep Learning   *Jun 2020 – Dec 2020*
- Designed a Bayes Neural Network Model on traffic classification dataset, which classifies into nearly ten different classes with 98% accuracy.
- The Traffic Classification data set provided by Cambridge University, by sniffing packets across distributed systems, containing around four lakh flows is processed to develop the model.

Automatic Checkout using Deep Learning   *May 2020 – Jun 2020*
- Implemented a CNN based object detection model by using Freiburg Groceries Dataset, which can detect and distinguish between 57 grocery items.
- Created a Web Application using Flask, HTML, CSS, JavaScript and deployed it on the IBM Cloud platform.

Twitter Sentiment Analysis   *Jan 2020 – May 2020*
- Created a sentiment analyser using various Machine Learning algorithms like SVM, Random Forest, Logistic Regression etc., on a Kaggle dataset of 50000 tweets.
- Utilized various feature vectors such as TF-IDF, Word2Vec, Count Vectorizer etc., and compared the results of all the various classifiers.

Handwritten Telugu Character Generation using GANs   *Jul 2019 – Dec 2019*
- Implemented Deep Convolutional Generative Adversarial Network (DCGAN) for generating Handwritten Telugu Language Characters .

ACHIEVEMENTS & EXTRA CURRICULARS:

- Received several appreciations and accolades for my work published in various articles and social media platforms (*Hindustan Times, The Week*)
- Awarded with Certificate of Merit on completion of GESE Examinations conducted by Trinity College, London.
- Shortlisted as one of the meritorious candidates and awarded a complete tuition fee waiver by IIIT Naya Raipur throughout my graduation.
- Selected as the University representative (two times) by the IPAC and rewarded with a Certificate of Excellence.
- Runner-up at District level Ice Skating competition.