ARYA CHAKRABORTY

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EDUCATION

B.Tech., Computer Science and Engineering Graduating June 2024
Kalyani Government Engineering College 9.3 CGPA

Relevant coursework: DBMS, Operating System, OOPS, Computer Networks, Pattern Recognition, etc.

TECHNICAL SKILLS

Data Analysis and Statistics: Google Data Studio, Pandas , Matplotlib , Plotly , Excel
Machine Learning and Deep Learning: Pytorch , Tensorflow , Sklearn , Numpy , OpenCV , BERT
Programming: Python, C++, C
Backend: Django , Flask
Database: MongoDB(Pymongo) , SQL

EXPERIENCE

Aarish Technologies, Quebec, Canada: Artificial Intelligence & Algorithm Developer April 2023 – June 2023

- I assisted in developing a **Quantized Convolutional Neural Network**, aiming to optimize storage utilization (space complexity) while automating various tasks involved in the process.
- I converted a **Python PyTorch model** of a Convolutional Neural Network to **equivalent C code**, with the objective of accelerating the computation and making it **able to run on every hardware**.
- **completion certificate**

Smollan, India: Data Analysis Intern July 2022 – August 2022

- I conducted **spot checks** on the provided data using **Google Data Studio** and used graphs and charts to derive insightful observations.
- I developed a code that **generates random data** while preserving the variance and distribution of the data.
- I Had to scrape data from websites like Walmart, Bestbuy and a lot more with the help of **a selenium scraper** for collecting data for our client, **Google**.
- more details can be found on my **completion certificate**

Juno Terra, India: Data Analysis Intern August 2022 – October 2022

- I was responsible for collecting weather data from an **API**, performing data cleaning, eradicating errors , and conducting thorough data analysis.
- I developed a code that generates a report out of that data using the **fpdf** module in python and compared the data with previous week's data to find out and show the **change in carbondioxide, oxygen, etc. levels**.
- more details can be found on my **completion certificate** and **demo work**

ACADEMIC PROJECTS

Parkify 9th July 2023 - 10th July 2023

Lead a team of four to develop an **application** that helps **users to park their vehicles** while giving a platform for parking-lot owners to **showcase available parking spaces**. The entire procedure is seamless, transparent, and **automated**.

- I helped develop the Deep Learning model or the **Convolution Neural Network** which helps to **detect number plates** of Indian vehicles. Our **accuracy was better than pre-trained OCRs** like easyOCR, pytesseract and keras OCR, which took more than 10 seconds to detect the number plate, while **our model took 2 seconds**.
- The **cameras** (present at the entrance and exit), which will contain the **quantized neural network** , will detect the entrance and exit of the vehicle and calculate the time and cost of the parking.
- We used a technique called **quantization** which helps to **reduce the number of bits** required to store the weights, biases, slope, and intercept of the neural network. And by reducing the bits, **we can reduce the storage or**

silicon in the camera required for the number plate detection, which in turn, will help us to **reduce the cost of the hardware** or the camera which will help us in the detection.
- This project helped our team secure **2nd** place in the **Hack4Bengal Hackathon**. More details can be found in the **devfolio project link.**
- Link for the YouTube demonstration - **YouTube video link**
- Link to GitHub - **GitHub link**

Nirnayaak 25 February 2023 - 27 February 2023

Lead a team of four to create a **website** that helps legal authorities find **legal documents for reference**, facilitating faster judgment in courts in **India**.
- I helped develop the Machine Learning model which helps to **rank documents** in deprioritization for a search keyword.
- I also used APIs like **cohere and YAKE**(Yet Another Keyword Extractor) to generate a summary in the form of text for an entire legal document, to save time for the user.
- This project helped our team secure **2nd** place in the **Diversion 2k23 hackathon presented by MLH**. More details can be found in the **devfolio project link.**
- Link for the YouTube demonstration - **YouTube video link**
- **paper link**

ChumlyAI December 2022

Made the **chatbot** for the GDSC KGEC website.
- used keyword extractor API to extract keywords and **pymongo** to fetch results from the database
- mostly **rule-based** solutions for queries, to reduce response time.
- used libraries like **logging**, **YAKE**, **Flask** and some algorithms specifically designed for answering queries related to GDSC KGEC.
- link for GitHub - **GitHub code link**
- link for YouTube video demonstration - **YouTube video link**

ACHIEVEMENTS AND KEYNOTES

Google Developer Students Club(GDSC), KGEC June 2022 – June 2023

AI/ML Lead
- Tutored undergraduate engineering students about Machine Learning and programming, **organized speaker session events** and **Hackathons**. **certificate**

Hackathons 2022 – 2023

offline
- **Smart India Hackathon** Finalist, **2022**.
- **2nd rank** holder in **Diversion 2k23** organised by **IEM Kolkata** and presented by **Major league Hacking.**
- **2nd rank** holder in the second edition of **Hack4Bengal** , (Eastern India's largest Hackathon).**certificate**

Coding Competitions 2022 – 2023

offline
- **4th Rank holder** in **h42** , Srijan '22 which is the tech fest of **Jadavpur University** , Kolkata.
- **1st rank holder** in **Swap and Code** , at the tech fest of **Techno International College** , New Town , Kolkata.

Ministry of External affairs 2023

selected among top 40 candidates across India
- selected candidate list, Term 2 - **reserve list 10th rank**

Links 2021 – 2023

website and DSA
- leetcode profile link(1000+ problems) - **leetcode**
- GFG profile link(100+ problems) - **GFG**
- Devfolio profile link - **devfolio**
- portfolio website link - **website**