HARSH DAVE
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EXPERIENCE

Senior Software Engineering, Drift Net Securities, Chicago, IL, USA **(August,2021 – Present)**

- **Role Description:-** Develop a visitor management system utilizing ML and DL to design a model which uses attention OCR mechanism to extract text from the visitors IDs or Driving License and give out structured format of the text detected to all connected systems.
- Lead development of ID Scanner project that was connected with client's paid and free version of website with REST Api's.
- Implemented ID Scanner application as a downloadable executable to client schools in 7 states.
- Lead development of several features of free and paid versions of companies products that are deployed across the United States. And was intertwined with the development of entire life cycle of the web development of company's flagships products
- Apart from the hiring process of new engineers to the team participating in both technical and personal aspects conducted both in person and over video conference.

Software Engineering, Salut Interactive INC., CA, USA **(January,2021 – May,2021)**

- **Role Description:-** I was assigned various **Computer Vision, ML & DL** tasks along with some layout fixes and fun features on flutter. During my span of the internship I developed my own **"Exercise Counter"** for various different exercises using tensorflow lite models for mobile devices where I extensively used tensorflow lite model maker library. Also I used the **"Posenet"** model to detect various different poses of the human body. I used the camera module for obtaining the live camera feed and performing detection and tracking on the real time data.

Software Developer, Aileensoul Technologies Pvt. Ltd, Ahmedabad, India **(July,2018 – March,2019)**

- **Role Description:-** On job trainee in Java Technology and Machine Learning as Programmer Analyst and Junior. Software Developer. Had rigorous training for 3 months in various JAVA technologies and related frameworks like Spring, Hibernate, Apache and worked on various existing Machine Learning algorithms to statistically clustering of sample datasets for getting the required predictions.

Software Engineering Intern, Softvan Infotech Technologies, India **(August,2017- March,2018)**

- **Role Description:-** Created an automated attendance system using machine learning, computer vision and image processing to identify objects from the images and video frames. Used Bounding Box Algorithm to develop the facial recognition system along with use of various libraries such as numpy, scikit learn, matplotlib, etc and had hands-on experience using Django and flask.

EDUCATION

Illinois Institute Of Technology **(Aug'19-May'21)**
Masters in Computer Science.

- **Major Coursework :-** Design and Analysis of Algorithm, Advanced Database Organization, Introduction to Artificial Intelligence, Machine Learning, Computer Networks, Software Project Management, NLP, Computer Vision, Geospatial Visualization, Cloud Computing, Big Data Technologies, Biometrics, Mobile Application Development. **GPA:-3.85**

L J Institute Of Technology, GTU Affiliated (2014-2018), India.
Bachelor of Engineering in Computer Engineering.

- **Major Coursework :-** Data Structures, Algorithms, Statistics, Calculus Database Systems, Operating Systems, Networking, Discrete Mathematics, Computer Architecture, Cryptography, Software Engineering. **CGPA:-8.03/10**

PROJECTS

- **Object Identification Using Computational Intelligence :-** Identification using computational intelligence is a project based on AI using Image Processing to identify objects in the images and video frames. We particularly implemented it on the Attendance System for schools and colleges.
- **Reconstructing Obfuscated Human faces :-** We used convolutional neural networks to reconstruct obfuscated images of human faces. The input to our algorithm is obfuscated human faces, essentially faces that are blurred using Gaussian Blur. An encoder-decoder-like architecture of convolutional layers is used to reconstruct the faces. The dataset being used is the Labeled Faces in the Wild. The metric to measure the performance of the model is SSIM. To train the model, it learned on Pixel Loss. In our study, our model is good enough to rebuild the faces of humans from an humanly unrecognizable state to a decently clear image.
- **Signature Detection And Verification In Documents :-** We used a real-time AWS Deeplens device for this project. The input was taken from Deeplens device and then the predefined bounding box algorithm will detect and localize the signature. Here we used complete cloud based architecture to perform computer vision analysis on images. Also for forgery detection we used binary classifiers and sagemaker.
- **School Database Management :-** This project is about collecting info about the school. Providing genuine information about the courses provided by the school and also providing a medium to connect to it.
- **One Touch 108 :-** This app will help in any medical emergency if needed any immediate medical assistance it will be activated by any gestures set by the user and will send a SOS to the contacts of family members and 108 services which entered while we login and will send the location of the site where the assistance is required within the accuracy of the API used.

TECHNICAL SKILLS

- **Languages/Data Formats :-** Python, Dart, Java, C, C++, SQL, HTML, CSS, JavaScript, JQuery, PHP.
- **Software :-** JetBrains PyCharm, Jupyter Notebook, Anaconda, Eclipse IDE, NetBeans IDE Tortoise SVN.
- **Servers/Frameworks :-** Flutter, MYSQL5.0, Android development Framework(API), Flask, Django.
- Have hands-on experience in **BIG DATA** Technologies and distributed systems like **Hadoop**, HDFS, DFS, etc.