ANISH KUMAR KHARWAR

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Education

2017 – 2021
Bachelor of Technology, Computer Science and Engineering
Indian Institute of Information Technology Kalyani
Cumulative GPA: 8.29

Experience

Nference Labs Pvt. Ltd. | Senior Software Engineer

Python, Bash, GCP, Azure, Tesseract, Django

August 2021 – Present

- Worked as part of De-identification Team; contributed to 5+ components of a publisher-subscriber architecture.
- Implemented new components for -
  A. Parsing mutational information present in gene panel reports (TIFF files), amounting to 810GB for 74k+ patients.
  B. De-identifying Carto dataset (Heart's EP) provided as XML and TXT files, amounting to 9TB for 40k+ patients.
  C. De-identifying genomic sequencing dataset of AVRO, BAM and VCF files, amounting to 230TB for 54k+ patients.
- Performed value analysis and added de-identification logic for 80+ new tables for EHR datasets across different AMC.
- Created a pipeline to aggregate and analyze redactions across tables in EHR datasets, reducing data loss in de-identification from 23% to 9% on 45TB dataset.
- Integrated a new image-model to process 12M X-Ray DICOM images in the image de-identification component.
- Implemented a parsing script to extract interpretable text from PDF files, solving the overlapping characters issue.
- Contributed to the Auth Team to build an access control backend.
- Developed 60+ APIs across Django models like user, user-role, group, organization, app and others to enable access control for admins and super-admins.

Awiros | Computer Vision and Machine Learning Engineer

Python, C++, TensorFlow, MXNet

June 2021 – August 2021

- Studied and analyzed the Casia and Facescrub datasets, (494k+ and 43k+ images respectively), focusing on class distribution, aspect ratio and blur.
- Trained and compared performance of 4 gender classification models; selected the best-performing model with 93.88% accuracy and 0.9303 F1-score to deploy for face-classification.
- Collaborated with the UI team to automate creation/loading, training, saving models and making predictions on input with the models using MXNet.

Vaultedge Software Pvt. Ltd. | Backend Intern

Python, Flask, MongoDB, Grafana

March 2021 – May 2021

- Migrated job scheduling from FIFO Queue to Priority Queue to process jobs based on associated priorities.
- Built a backend with 6 REST APIs using Flask to connect MongoDB to Grafana for data visualisation.
- Formulated 20+ equations to monitor and display the overall system performance.

Skills

Languages & Scripting: Python, Bash
Frameworks: Django, Flask
Libraries & Tools: OpenCV, Tesseract, Pandas, NumPy, Matplotlib/Seaborn
Cloud Platforms: GCP, Azure
Databases: SQL, MongoDB

Interests

Backend Development, Distributed Systems, Computer Vision, Algorithms, Data Structures