DEEPANSHU SACHDEVA

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EDUCATION

Masters of Science in Computer Science ***AUG 2023- MAY 2025***
(*University of Colorado Boulder*)
Relevant Coursework: Design and Analysis of Algorithms, Natural Language Processing
GPA: 4.0/4.0

Bachelors of Technology, Computer Science ***AUG 2018- MAY 2022***
(*Indian Institute of Information Technology, Dharwad, India*)
Relevant Coursework: Data Structures, OOPs, OS, Networking, Computer Architecture, Discrete Mathematics
CPI: 8.34/10.0

TECHNICAL SKILLS

- **Languages** : Python, SQL, CSS, C++, MATLAB, C, JavaScript, HTML, JAVA, GPU, LiDAR, Analytics, R Programming language
- **Libraries/frameworks** : Pytorch, Keras, Tensorflow, React.js, Vue.js, OpenCV, Selenium, Scrapy, Pyspark, SparkSQL, MongoDB
- **Data science tools** : Numpy, MatplotLib, Keras, Seaborn, Pandas, Cosmos DB, Docker, Kubernetes, Azure, Data Analysis, NLTK
- **Other**: Unit Tests, PyTest, CI/CD, Git, OOPS, Hadoop, Linux, Microservices, Streamlit, Unsupervised Learning, JIRA, Confluence

GROUP PROJECT EXPERIENCE

1. **Title: Tracking & Analysis of Physical Activity & Nutritional Intake using Artificial Intelligence**
   Indian Institute Of Information Technology Dharwad ***JAN 2022- APRIL 2022***
   Team Size: 4 **Role**: Team Lead

- Devised a vision based machine learning model to prevent injury in athletes by analyzing posture and exercise performed using Graph Neural Networks.
- Analyzed and suggested correct posture using an automated system which prevents injuries by over 70%, it also predicts number of calories burnt using heatmap generated by combination of Convolutional Neural Networks and Recurrent Neural Networks with an accuracy of 89%.

Techstack - Python, Pytorch, OpenCv, Numpy

2. **Title: Sleep Apnea Detection [IIIT Dharwad]**
   Indian Institute Of Information Technology Dharwad ***JAN 2021- MARCH 2021***
   Team Size: 4 **Role**: Team Lead

- Assessed presence of Sleep Apnea in a person leveraging ECG signal data and applying Fast Fourier Transform to convert it into 2D data points, on a dataset of 70 eight hour signal recordings.
- Reduces chances of heart attack in patients with Sleep Apnea by early detection of respiratory distress with an accuracy of 88%.

Techstack - Python, Scikit Learn, Pytorch, Numpy and Pandas

WORK EXPERIENCE

Research Assistant - University of Colorado Boulder (Vignesh Kashinath Lab) ***JAN 2023- Present***

- Developed a Segmentation model pipeline using U2 net to classify ribosomes, chromosomes and other parts of nucleus
- Visualized 3D representation of the nucleus using image stacking methodology.
- Streamlined the flow of data into the image processing pipeline to reduce the training time by 40%

Software Engineer, Samsung Data Systems, ***MAY 2022- AUG 2023***

- Developed an interface operating Vue.js framework in Javascript and Java Spring Boot, helps in rendering Big Data to users in real time. I also reviewed the backend application interface to write highly efficient SQL queries and wrote REST APIs.
- Created front-end using Vue.js and increased efficiency of rendering data to end users by 70% and decreased cost of production while improving speed and agility of product using microservice architecture.
- Developed Unit Tests for the backend APIs along with simulation to test the efficiency and scalability

Data Science Intern,Text Mercato Solutions Pvt Ltd ***JAN 2021- FEB 2022***

- Built OCR pipeline for FMCG products to extract information to cluster products together.
- Developed a 3D object detection model to convert 2D clothing images to 3D counterparts.
- Constructed MLFLOW pipeline using FastAPI and automated Data Engineering process
- Developed Distributed training pipeline using AWS Sagemaker and used AWS lambda to use auto training and deployment.