AKHIL MAHAJAN

Email: akhil20107@iiitd.ac.in
DOB: September 20, 1992

Education

IIIT, Delhi — CGPA: 8.86
M.Tech(CSE) — (Till 2nd Semester)
2020-Present

VIT University, Vellore — CGPA: 8.95
B.Tech(CSE) Hons.
2010 – 2014

Delhi Public School, Jammu(J&K) — Percentage: 88.6
HSC(XII)
CBSE
2009 – 2010

Delhi Public School, Jammu(J&K) — Percentage: 92.2
SSC(X)
CBSE
2007 – 2008

Skills

Expertise Area	Machine Learning, Data Structures, Algorithm Design and Analysis, Communication Skills
Programming Language	C, Python, SQL(Beginner)
Tools and Technologies	LaTeX, PyCharm, Google Colab, Android Studio, Zotero, NumPy, Pandas, Scikit-Learn, Keras
Technical Electives	Information Retrieval, Meta Learning, Mobile Computing, Data Lifecycle Management

Publication

Building an AI model on ECG data for identifying stressed healthcare workers involved in Covid-19 treatment — (15 – 17th Sep, 21) Authors - 5
Conference: ICECCT, Tamil Nadu, India
The aim of this research was to identify whether subjects were stressed or satisfied based on their ECG data only. The medical data was collected from various hospitals across India. Normalization techniques like MinMax along with a modified form of AlexNet (Deep learning model) gave the best results and the paper was accepted for publication in IEEE Xplore.

Internship

Medical Webstore Data Analysis (Research) — (May,13 –July,13)
Guide: Kamlesh Singh, CSIR, IIIM

Completed 4 weeks of summer research internship where the major focus was to learn about various techniques used in data cleaning, data analysis and applying predictive modelling on data collected from various medical stores.

Projects

Content-based Information Retrieval System (CBIR) (Feb,21 – May,21)
Guide: Dr. Rajiv Ratn Shah, IIITD Team Size - 4
The aim of this project was to extract similar images to a query image from a dataset. Feature Extraction techniques like SURF, SIFT and HOG and Dimensionality reduction techniques like PCA, LDA were applied. The extracted features were matched using Cosine Similarity and Euclidian Distance.

ParkME App (Feb,21 – May,21)
Guide: Dr. Mukulika Maity, IIITD Team Size - 4
We created an android application with an aim to resolve grievances arising due to wrong parking in a society/institution. User can click the picture of a vehicle's number plate and the corresponding owner of the vehicle would be notified about the wrong parking. It was implemented in Android Studio and text extraction was done using Machine Learning.

Distracted Driver Detection Using Machine and Deep Learning Techniques (Aug,20 – Dec,20)
Team Size - 3
Guide: Dr. Tanmoy Chakraborty, IIITD
We proposed a comparative analysis between Traditional ML Algorithms like DT, SVM, KNN, Xgboost and Deep Leaning techniques like ResNet-101 based on their accuracy to detect a distracted driver. The features extracted using feature extraction techniques like HOG, SURF and LBP were combined into a single vector and then given as input to above models.

Positions of Responsibility

- Teaching Assistant – OOPD (Aug,21 – Present)
- Teaching Assistant – Linear Optimization (Feb,21 – May,21)
- Teaching Assistant – Systems Programming (Dec,20 – Jan,21)
- Teaching Assistant – Computer Networks (Aug,20 – Dec,20)
- Dell EMC Student Ambassador for VIT University (Dec,13 – May,14)
- Organizer of E-hack event at SRM University (July,13 – July,13)
- GNU Linux User Group Organizer (May,11 – May,14)

Awards and Achievements

- Cleared GATE exam with 97.1 percentile.
- Cognizant Certified Student(CCSP) by Cognizant.
- Presented our research paper at 4th ICECCT conference.
- AMCAT Certified by Aspiring Minds with 99 percentile in CSE subject.
- 30th position in IEEE Xtreme 5.0 – competitive programming competition.
- Member of the Organizing Committee for one of the largest hackathons in India.
- Participated in prestigious MUNs like MUN-APPULSE(NIT Trichy) and BITS-MUN(Goa).

Interests and Hobbies

- Model United Nations
- Volunteer Work - Sharan Charitable Trust, Ved Mandir Bal Niketan
- Reading Books
- Competitive Programming