(+91) 9779159776 | achleshwarluthra6@gmail.com

Achleshwar **Luthra**

Computer Vision, Digital Image Processing and Machine Learning Enthusiast

WORK EXPERIENCE

JUNE 2020 – AUGUST 2020

MACHINE LEARNING INTERN– Inversion Consultancy LLP, Bengaluru, Karnataka
+ Designed and developed **Sentiment Analysis** model using Natural Language Processing.
+ Gathered requirements and developed project plans.
+ Used **GetOldTweets-3** API for scraping twitter data.
+ Used packages like **tf-idf** for word embeddings.
+ Used **NLTK** library for performing advanced NLP functions.

May 2020 – June 2020

DATA SCIENCE INTERN– PASS Consulting Group, Hyderabad, Telangana
+ Built an **Election Prediction model** which I did by studying **Nate Silver's US models** and replicated the concept for Chittoor district of India.
+ Implemented different regression models such as **Lasso** regression, **Ridge** regression and **Linear** regression.
+ Presented data science findings to peers using, Machine Learning model explanatory library, **eli5** - illustrating the progress made during various tasks.
+ Created data visualization graphics using **plotly**, translating complex data sets into comprehensive visual representations.

EDUCATION

2018 - Present

BACHELOR OF ENGINEERING – Electrical and Electronics Engineering
Birla Institute of Technology and Science, Pilani (Pilani Campus)

May 2018

ISC BOARD – Class XII
Holy Heart Presidency School, Amritsar, Punjab
Aggregate Percentage – 93.25

May 2016

ICSE BOARD – Class X
Holy Heart Presidency School, Amritsar, Punjab
Aggregate Percentage – 94.4

ACADEMIC PROJECTS

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Jan 2020 – May 2020

ELECTROMAGNETIC MODELLING USING ARTIFICIAL NEURAL NETWROKS

+ Conducted a deep study on the design of **Microstrip Patch Antenna** and the role of **Artificial Neural Networks** in its modeling.
+ Suggested a general design procedure for microstrip antennas based on rectangular patch geometry using artificial neural networks.
+ Documented the comparison between results obtained using neural networks and experimental results.
+ Concluded that **Radial Base Function** is the most accurate, sufficiently fast, and yields satisfactory results

Github Repo - https://github.com/Achleshwar/Electromagnetic-Modelling-using-Artificial-Neural-Networks

PERSONAL PROJECTS

June2020 – August 2020

DIABETIC RETINOPATHY DIAGNOSIS USING CNN

+ Conducting rigorous reading sessions with my team-mate and read many research papers
+ Read deeply about the disease to understand the gravity of the problem statement.
+ Used various data augmentation to deal with class imbalance.
+ Explored many pretrained models for transfer learning and used AlexNet with appropriate tuning.
+ Deployed the model using Flask server.

Github Repo - https://github.com/Achleshwar/Diabetic_Retinopathy
YouTube Link - https://youtu.be/emq6Xic2HK4

June 2020

DAY-NIGHT CLASSIFIER (FROM SCRATCH)

+ Built a **shallow neural network** from scratch
+ Focused on exploring the **calculus** involved behind deep learning algorithms
+ Successfully achieved state-of-the-art condition.
+ Wrote a **blog** on the learnings from this project to help the beginners.

Github Repo - https://github.com/Achleshwar/Day_Night_Classifier
Blog - https://link.medium.com/HHpnUQZoG7

CONFERENCES AND WORKSHOPS

July 2020

EPF VIRTUAL INTERNATION TECH CAMP 2020

Organized by – EPF Graduate School of Engineering

+ A week long programme that offered engaging modules on the latest technological innovations and newest developments in engineering in France

Feb 2020

IIT-BOMBAY'S DATA SCIENCE WORKSHOP

Organized by – E-Cell, IIT Bombay

+ 2-day workshop (6 hr each) conducted by leading industrialists from **ZS Associates**.
+ Got familiar with the basics of Data Science.
+ Did quality projects such as **E-commerce Analysis**, **Face-Recognition** and much more.

SKILLS

LANGUAGES   Python, C++, C
KEY COURSES   Digital Image Processing, Neural Networks and Fuzzy Logic, Discrete Mathematics for Computer Science, Optimization, Probability and Statistics, Differential Calculus, Linear Algebra.
FRAMEWORKS   Tensorflow, Keras, PyTorch
MISCELLANEOUS   Amazon Web Services (AWS), MATLAB, Octave, Flask

VOLUNTEER EXPERIENCE

May 2020 – July 2020

BHARTIYA JANTA PARTY
Social Worker
+ Actively participated in **Modi Roti Bank**, a movement started by **Prime Minister of India** during Covid-19.
+ Helped the organization in providing three meals per day to the needy people.

June 2020 – July 2020

INDIAN NATIONAL CONGRESS
Social Worker
+ Helped the victims of Covid-19 along with **Punjab Congress Seva Dal** for a period of two months.
+ Provided **sanitizers** and other essential **PPE** to those who couldn't afford.

POSITION OF RESPONSIBILITY

Aug 2020 – Present

NITE COORDINATOR – PUNJAB CULTURAL ORGANIZATION, BITS PILANI
+ Responsible for mentoring and leading an organisation of **over 120 students** to help organise cultural events related to the heritage of Punjab and showcase them to the students of the college

May 2019 – Present

TEAM LEAD – DANCE CLUB, BITS PILANI
+ Leading a team of **over 50 members** in all the intra as well as inter-college competitions.
+ Responsible for managing the **budget of the club**, taking care of all the logistics and hosting events within to college.