Diksha Aggarwal

B. Tech Computer Science and Engineering

+91 9310319722 Gurugram, Haryana dikshaa589@gmail.com linkedin.com/in/diksha-aggarwal21/ github.com/Diksha-Aggarwal

Result-oriented college student pursuing bachelor's degree in CSE specialising in Artificial Intelligence and Machine Learning. Aiming to secure a position where I can efficiently contribute my skills and abilities to the growth of the organization and build my professional career carrying a motive to learn and connect with other like-minded people. Frequently praised as hard-working by my peers, I can be relied upon to help the company towards its goal.

Experience

AIML Intern — **Jan 2024 - Present**
Indian Space Research Organisation (ISRO)
- Working on ISRO's flood prediction project at NRSC (RRSC-N), implementing advanced ML and DL techniques, processing remote sensing data for accurate predictions, and collaborating with a multidisciplinary team.

Python Developer — **June 2023 - October 2023**
Aaizel International Technologies Pvt Ltd
- Developed an altogether new technique in weather forecasting which is used by military and civil agents
- Initiated research, analyzed business operations, and made a patented product
- Planned product development by providing crucial insights through predictive modeling

AIML Intern — **May 2023 - July 2023**
C-DAC, MeitY
- Prepared applications for the E-Governance dept. of the company, which reduces the manual work by 75%
- Formulated software requirements of their applications and prepared technical articles
- Worked with 2 analysts to institute a technique in modeling which saved about 60 quarterly hours in customer comparisons

Data Science Intern — **June 2022 - Aug 2022**
Yoshops.com
- Identified valuable data sources, automated collection processes by analysing large amounts of information to discover trends and patterns
- Collaborated in building machine-learning algorithms, presented information using data visualization techniques
- Proposed solutions and strategies to business challenges by collaborating with engineering and product development teams

Machine Learning Intern — **July 2022 - Aug 2022**
Feynn Labs
- AI Product/Services Prototyping (under Feynn Labs AI Incubator Program)
- Large Scale Predictive Market Segmentation using Machine Learning & Data Analysis (under Feynn Labs Consultancy Services)
- AI Product/Service Business & Financial Modelling using Machine Learning

Education

B.TECH CSE (AUG 2020-PRESENT)
The NorthCap University
Specialisation in AI/ML
SENIOR SECONDARY, NON-MEDICAL (APRIL 2018-APRIL2020)
DPSG, Palam Vihar, Gurugram
Physics, Chemistry, Maths, English, Computer Science(Python)

Publications and Honors

- "Temporal Normalization and Brain Image Analysis for Early-Stage Prediction of Attention Deficit Hyperactivity Disorder (ADHD)". International Conference on Computing & Communication Systems for Industrial Applications: ComSIA 2024
- Received prize money for best industrial project across entire AIML specialisation
- Semi-finalist at WIEHACK 4.0 international hackathon
- Finalist at Lab Rats Quiz organised at DTU's Tech Fest

Projects

UASS Weather Prediction System
- Developed a patented software using real time data which generates MET, TEMP formats , METAR report, wind FM-36 V report and leveraged Generative Adversarial Networks to effectively interpolate missing data.
- Programmed an interactive GUI application with PyQT, pandas, numpy, matplotlib, metpy in Python using VS Code

Linking Writing Processes to Writing Quality
- Developed a predictive model to assess overall writing quality by analysing keystroke logs, offering insights for writing instruction, automated evaluation, and intelligent tutoring systems.
- Successfully trained and validated models, making accurate predictions on the writing quality of unseen data using XGBoost, CatBoost and Random Forest

Diksha Aggarwal

B. Tech Computer Science and Engineering

+91 9310319722 Gurugram, Haryana dikshaa589@gmail.com linkedin.com/in/diksha-aggarwal21/ github.com/Diksha-Aggarwal

Salt Identification beneath Earth's surface

- Implemented a machine learning algorithm to enhance seismic imaging accuracy for identifying salt deposits beneath the Earth's surface using U-Net convolutional neural network to automatically identify subsurface targets as salt or non-salt.
- Achieved competitive performance by implementing a threshold optimization strategy based on Intersection over Union (IoU) metrics.

AI Chatbot

- Developed a user-friendly chatbot leveraging Flask, Natural language processing (NLP) and JSON to facilitate government services and enhance accessibility for citizens.
- The chatbot is able to answer over 90% of queries correctly, and it helped to reduce the number of calls to government call centers by 20%.

Signature Forgery Detection

- Developed a system in Python using various image processing and deep learning techniques to distinguish between genuine and forged signatures to ensure the authenticity of important documents.
- Implemented Mutlilayer Perceptron Neural Network for classification and utilized libraries like tensorflow, keras, skimage, scipy, numpy, pandas, time, os and matplotlib

ADHD Early Stage Prediction

- Developed and trained a diagnostic classifier for ADHD subtypes using the ADHD-200 dataset, achieving a peak accuracy of 94.12% with SVM.
- Conducted extensive research and performed preprocessing, temporal normalization, analysis of fMRI brain images using Python and specialized tools resulting in a first prize in my industrial project.

Spaceship Titanic

- Predicted which passengers were transported by the anomaly using records recovered from the spaceship's computer system
- Built a model including several ML algorithms like Random Forest, Decision Trees, Logistic Regression, KNN, xgboost, neural networks, SVM getting an accuracy of 95% using Ensemble Learning based Random Forest

Market Customer Segmentation

- Analysed who can be our target customer having some basic data of our customer in hand using unsupervised K-means clustering algorithm
- Recognised the preferences and needs of each group, and tailor their marketing strategies accordingly.

McDonald's Customer Study

- Developed an in-depth data analysis of McDonald's fast food data to gain valuable customer insights based on socio-demographics and psychographic factors using various data visualization libraries.
- Classified customers into segments by performing data analysis, preprocessing, visualization, clustering techniques

Skills

Hard Skills

Python, Java, C Language, Machine Learning, Deep Learning, Artificial Intelligence, NLP, Computer Vision, Image Processing, Data Structures, Data Science, MySQL, Jupyter Notebooks, VS Code, PyCharm, Spyder, Google Colab, Sublime TXT, Dev C++

Soft Skills

Problem-solving, Public Speaking, Management, Content Writing, Leadership, Highly Organised, Team Player, Decision-making

Major Certifications

PCAP- Programming Essentials in Python (Jan 2023)
Cisco - NetAcad

AWS Machine Learning Foundations (Nov 2022)
Amazon Web Services

Machine Learning Foundations for Product Managers (Aug 2022)
Coursera

JavaScript Essentials 1 (JSE) (Jan 2023)
Cisco - NetAcad

Introduction to Artificial Intelligence (Oct 2022)
Simplilearn

Machine Learning for Data Science and Analytics (June 2022)
Edx

Voluntary Experience

Editorial lead at Creator's Garage **Nov 2021-Present**

- Professional society at NCU where I provide technical content for their monthly magazines and social media handles
- Organised and managed aroud 500 students in both intra and inter college events with my team