MOHNISH SACHDEVA

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OBJECTIVE

To obtain a challenging position in an organization where my resourceful experience and academic skills will add value to organizational operations.

PERSONAL DETAILS

Address
33, Tirth Nagar, New Sanganer Road Sodala
Jaipur, Rajasthan – 302019

Date of Birth: 1995 – Dec – 13

Github: https://github.com/mohnishsachdeva

WORK EXPERIENCE

Assistant Professor – Poornima Institute of Engineering and Technology (Nov 2022 – Ongoing)

- Teaching Programming, Machine Learning, Artificial Neural Network, Deep Learning and multiple subjects with hands on projects in the department of Artificial Intelligence and Data Science.

Advisor and Trainer – Axis India Machine Learning (Oct 2020 – Sep 2022)

- Designed the Statistics, Linear Algebra, Calculus, Machine Learning and Deep Learning Course.
- Implemented machine learning algorithms in python from scratch and through libraries.

ML/AI Trainee – Axis India Machine Learning (Jan 2020 – Sept 2020)

- Learned Machine Leaning and Deep Learning concepts from scratch
- Implemented several machine learning algorithms in python without using high level abstraction.

Django Developer – Flit Webs (Jun 2019– Sept 2019)

- Developed Work Report System in Python Django.

VLSI Industrial Trainee – DKOP Labs (Jun 2017 – Jan 2018)

- Developed projects on Verilog and System Verilog

PROJECTS

Myers-Briggs Type Indicator (MBTI) Personality Profiling with Text Posting Style

- Implemented Multinomial Naïve Bayes to predict personality types based on person's unique behaviour, feelings, and thoughts out of 16 different personality which are the combination of four preferences that indicate how an individual: energizes (Extroversion v. Introversion), perceives information (Sensing v. Intuition), makes decisions (Thinking v. Feeling) and lives his life (Judging v. Perceiving).

Music-Genre-Classification

- GTZAN dataset, which contains 1,000 audio clips evenly distributed across ten different genres. Each audio clip is 30 seconds long and sampled at 22.05 kHz.
- Skills/Libraries used: Librosa, Tensorflow, Keras

Amazon fine foods review classification

- Performed rating classification on nearly 6,00,000 food reviews
- Skills/Libraries used: Machine Learning, NLTK, Regular Expressions, Dask

A_Z Alphabets Handwritten Character Recognition

- Designed Neural network for nearly 300000 rows
- Skills/Libraries used: Deep Learning, OpenCV, Keras

Devanagari Handwritten Character Recognition

- Performed Multiclass classification on nearly 80,000 images
- Skills/Libraries used: Machine Learning, Numpy, Pandas, PCA

Machine Learning Algorithms

- Implemented Naïve Bayes, Binary Logistic Regression, Multiclass logistics regression, Linear Regression from scratch and with libraries too, in python on several datasets like Breast Cancer, Mushroom Types, Iris Flowers, Housing Prices, Titanic Survival, Steel Industry, Adult Census Income, etc. with deployment in Flask, Streamlit.

5 Stage Pipeline processor with Bi-modal Branch Predictor

- Dynamic Branch Prediction to enhance the processing speed of processor
- In this Branch Predictor going to predict whether branch is taken or not taken according to the prediction bit.

AMBA AHB-Lite Protocol

- AHB-Lite is a subset of full AHB Specification for use in designs where only a single bus master is used.
- AMBA AHB-Lite is a Master(s) and Slave(s) communication protocol in which peripheral devices can communicate with each other.

SKILLS

Technical Skills: Python, SQL, C++

Key Skills: Machine learning Algorithms, Predictive Analysis, Data Visualization, Statistical Modelling, Data Analytics, Model development

Tools & Libraries: NumPy, Latex, Pandas, Dask, Scikit-learn, NLTK, Keras, Excel, Power Bi, Google Colab

Mathematical skills: Probability and Statistical: Expected Values, Probability Distribution (Normal, Binomial, Multinomial, Poisson, Rayleigh, Exponential), Sampling Distribution, Maximum Likelihood Estimation, Hypothesis Testing, Z-test, Student t-test, Paired Test, ANNOVA, Pearson correlation test, Chi-square test, KL Divergence.

Linear Algebra: Vectors operations, Matrix operations, Gauss Jordan Elimination, Row reduce echelon form, Projection Matrices, Eigen vectors, Hessian Matrix, Covariance Matrix, Principal component analysis.

Calculus and Convex Optimization: Differentiation, Partial Differentiation, First Order Optimization (Gradient Descent), Second order Optimization (Newton's Method).

Deep Learning and Machine Learning: Naïve Bayes Classifier (LDA, QDA, and RDA), Logistic Regression, Linear regression, Support Vector Machine, Decision tree, Random Forest, K-Mean clustering, Neural Networks.

EDUCATION

Apex Institute of Management and Science – Masters of Computer Application (2018 - 2020)

- Percentage – 72

JECRC University, Jaipur, Rajasthan – Bachelor of Computer Application (2014 - 2017)

- CGPA – 8.2

Kendriya Vidyalaya No. 5 – Senior Secondary Examination (2013 - 2014)

- Percentage – 63

Kendriya Vidyalaya No. 5 – Secondary Examination (2011 - 2012)

- CGPA – 7.2