WOXSEN UNIVERSITY

JS Mohammed Hafeez

4-Day Placement Training Portfolio

Cerebra Tech

- "We're excited to welcome you to our thriving community! Let's collaborate, innovate, and create solutions that shape the future together."
- "Cerebra Tech is an agile startup focused on crafting comprehensive, cutting-edge projects with modern technologies."
- "Our mission is to drive meaningful impact while nurturing a culture of creativity, growth, and lifelong learning."

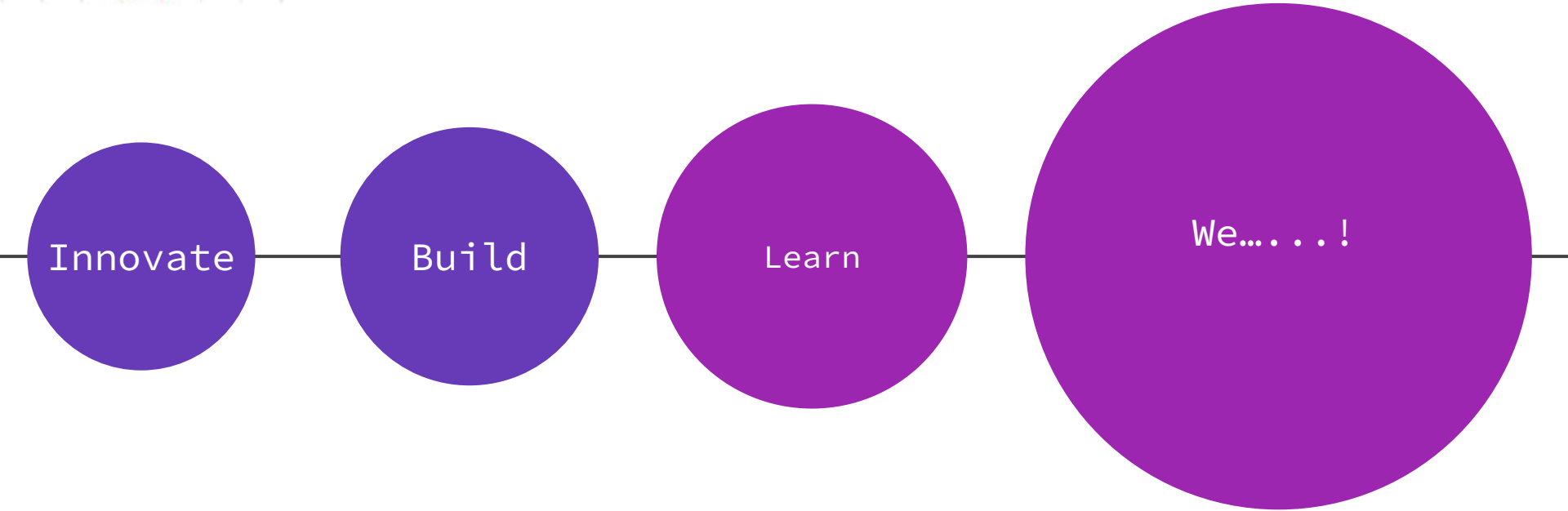
CEO & Teacher

Dr. Thasni ma'am

Program Director

School of Technology

Cerebra Tech Pillars



About me

I'm passionate about building great products that make humanity to another level. I have over 4-days of experience innovating, building, and learning some small projects to real-time projects. I have got a great experience while participating in every assignment and project works. "I think I begin to start explore or move forward from here on, after joining CEREBRA TECH company where I Innovate, Build, and Learn."

JS Mohammed Hafeez
21WU0101015
B.Tech, CSE

Day-1

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Python Programming:

Overview: The entire Python programming course was covered in one intensive session. The experience was engaging and insightful, making it easy to grasp the concepts quickly.

- ➔ Assignments: Worked on 13 hands-on assignments designed to cover all the major Python topics comprehensively.
- ➔ Data Structures: Lists, tuples, dictionaries, and sets.
- ➔ Functions: Creating reusable code blocks and working with parameters.
- ➔ Control Flow: If-else statements, loops, and nested constructs.
- ➔ Object-Oriented Programming (OOP): Classes, objects, inheritance, and polymorphism

Day-2

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MySQL:

Mysql Focused on understanding MySQL and its usage for managing relational databases.

- ➔ **Learned MySQL Fundamentals:** Covered basic SQL operations such as SELECT, INSERT, UPDATE, DELETE, and JOIN, as well as understanding database schema, normalization, and relationships between tables.
- ➔ **Practice Questions:** Completed 100 practice interview questions to solidify the concepts of MySQL. These questions helped in mastering query writing, database manipulation, and data retrieval techniques.
- ➔ **Solved 50 Challenging Questions:** Tackled 50 questions from the training, applying advanced SQL concepts like subqueries, indexing, complex joins, and aggregate functions. This hands-on practice improved the ability to write efficient SQL queries and troubleshoot database-related issues.

- **Key Learning:** Gained a deeper understanding of how relational databases work, how to manage large datasets, and how to optimize queries for performance.
- **Hands-On Practice:** Writing a query to retrieve data from a table: SELECT name, age FROM students WHERE age > 18; Writing a query to retrieve data from a table: INSERT INTO students (name, age, grade) VALUES ('John Doe', 20, 'A'); Joining two tables to fetch data from both: SELECT students.name, courses.course_name FROM students INNER JOIN enrollments ON students.id = enrollments.student_id INNER JOIN courses ON enrollments.course_id = courses.id; Using a subquery to get students who scored above average: SELECT name, score FROM students WHERE score > (SELECT AVG(score) FROM students);

Day-3

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Learning NumPy, Pandas, Matplotlib, and EDA (Exploratory Data Analysis):

NumPy & Pandas:
Focused on key data analysis libraries like NumPy, Pandas, and Matplotlib, along with performing Exploratory Data Analysis (EDA) on datasets. Covered topics such as detecting outliers and addressing class imbalance.

Overview:
NumPy is a Python library for efficient numerical computing, providing support for multi-dimensional arrays and matrices. It offers a wide range of mathematical functions for operations on large datasets.
Pandas is a Python library for data manipulation and analysis, offering flexible data structures like DataFrames and Series. It simplifies tasks such as data cleaning, transformation, and exploration with intuitive indexing and powerful functions.

Matplotlib: Learned how to visualize data using Matplotlib, creating various types of plots like line charts, bar charts, and histograms.

Exploratory Data Analysis (EDA): Performed EDA to understand the dataset's structure, detect outliers, and handle class imbalance.

Outliers: Identified outliers in the dataset using statistical methods and visualizations.
Class Imbalance: Addressed class imbalance by applying techniques like resampling and using visualization methods to understand the imbalance.
Machine Learning: Machine Learning is a branch of Artificial Intelligence (AI) that focuses on building systems capable of learning from data and improving their performance over time without explicit programming. ML algorithms analyze large datasets to identify patterns, make predictions, or make decisions based on input data.
Types of Machine Learning:
- Supervised Learning
- Unsupervised Learning
- Reinforcement Learning

Real-World Applications:
- Healthcare
- Finance
- Retail
- Transportation

Typical ML Workflow:
- Data Collection
- Data Preprocessing
- Model Selection
- Training
- Evaluation
- Deployment

I have done project Iris by using iris dataset
SepalLength
SepalWidth
PetalLength
PetalWidth
It will tell that what it is in these following
Setosa
Versicolor

Accuracy: 1.0

Classification Report:

	precision	recall	f1-score	support
Iris-setosa	1.00	1.00	1.00	10
Iris-versicolor	1.00	1.00	1.00	9
Iris-virginica	1.00	1.00	1.00	11
accuracy			1.00	30
macro avg	1.00	1.00	1.00	30
weighted avg	1.00	1.00	1.00	30

Day-4

Deep Learning:

Deep Learning is a subset of machine learning that uses multilayered neural networks to simulate the decision-making power of the human brain. Unlike traditional machine learning models, deep learning models use many layers to learn complex features and perform sophisticated tasks.

Key Concepts:

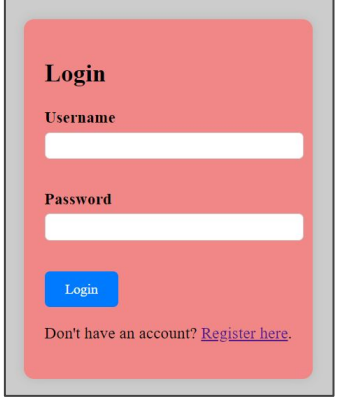
Neural Networks: Layers of interconnected nodes that process information.

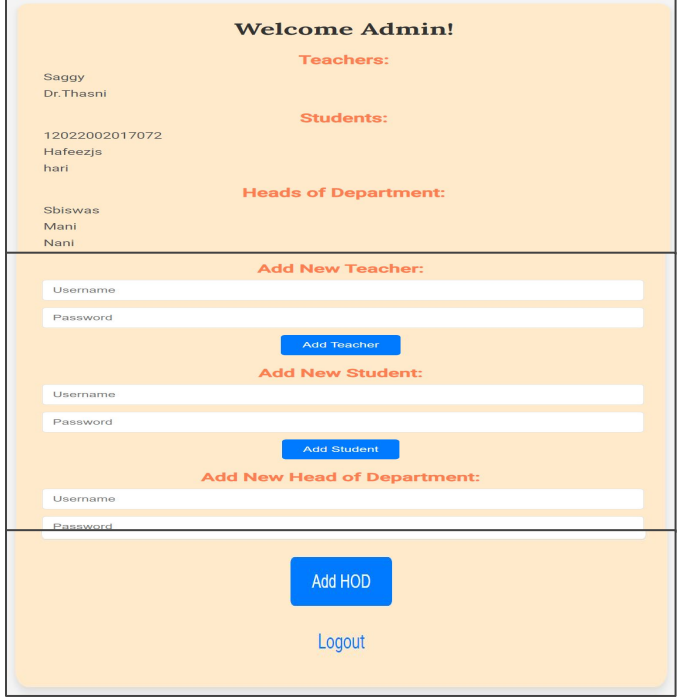
Forward Propagation: Data moves through the network from input to output layers.

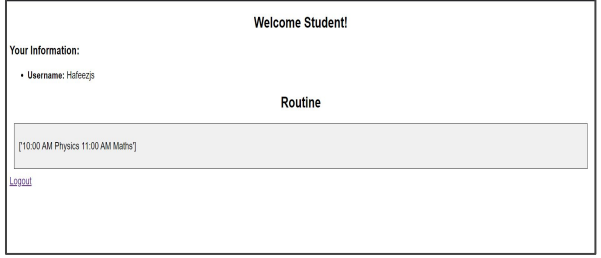
Backpropagation: Adjusts weights and biases to correct prediction errors.

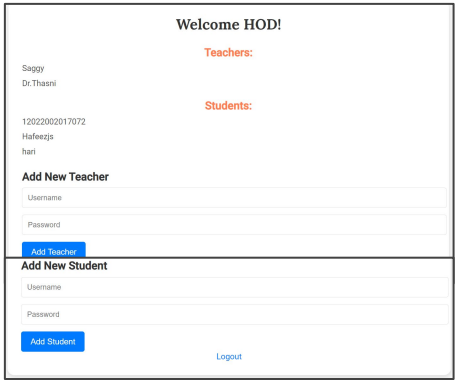
Applications:
- Digital assistants
- Voice-enabled devices
- Credit card fraud detection
- Self-driving cars
- Generative AI

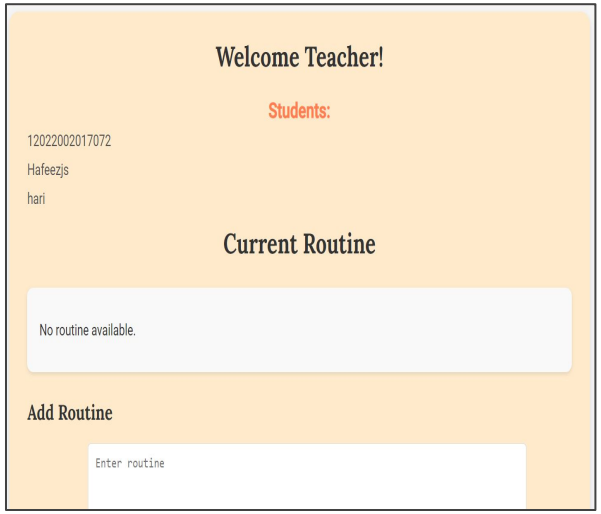
Deep learning enables systems to learn from vast amounts of data and improve their performance over time.











Student Grading System

A website where Admin, HOD, Teacher, and Student can access or fetch details about their academics by registering and logging in. I used the technologies like MySQL, HTML, CSS, Flask, Python, etc,.

Career highlights

Frontend Web Developer

INDUSTRIAL INTERN

CYBER CASTRUM LLP, Hyderabad

August 2024 - Present

WEB Developer

SUMMER INTERN

Corizo Edutech Platform, Online

September 2023 - November 2023

Contact

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