

MINI – PROJECT LOGBOOK

GROUP MEMBERS

- 1.Mohammed Maviya Qureshi– 2101091
- 2.Radha Tumbre – 2101121
- 3.Anmol Preet Singh – 2101109
- 4.Kashik Sredharan – 2101114

SUPERVISOR / GUIDE

Dr. G. T. Thampi



Department of Artificial Intelligence and Data Science

TSEC, Mumbai – 400050



University of Mumbai

(Academic Year 2023 – 24)

INSTITUTE VISION & MISSION

VISION:

Perpetuating and transcending the processes of:

- Contributing to evolving supply chain of human capital for National Economy
- Creating entrepreneurs and ‘game changers’ to support heightened level of economic activities underpinning ever increasing human aspiration
- Helping the Nation evolve as a total solution provider
- Value and wealth creation for the mankind

MISSION:

Focusing and practicing:

- Product and processes innovation
- Leveraging human cognitive and behavioural science for creating instructional content
- Pervasive and ubiquitous Information Communication Technologies for customized content for learning
- Acknowledge and facilitate various learning styles and learning abilities
- Migrating from teaching paradigm to learning paradigm
- Every day discourse shall inculcate research culture and further the cause of societal advancement
- Understand various markets and cultures
- Collaborative learning and emotional integrity
- Sensitizing about opportunities in Energy, Education, Environment and Health care sectors
- Extensively promoting computer aided design, analysis and manufacturing procedures
- Theoretical rigor to develop conceptual clarity
- Modelling and design of experiments to inculcate culture of investigation
- Helping foot print on Project management and collaborative human endeavour
- Interdisciplinary studies and exposure to functional areas

ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

VISION:

Transcending the process of integrating intelligence to Technology Products and Processes by architectural and algorithmic solution building procedures resulting in autonomous entities which shall surpass collective human intelligence.

MISSION:

- Engage learners to develop competency in algorithmic approaches in resolving complexities of real time problems.
- Help pupils to develop competency in creative and architectural solution building processes for building efficiencies
- Initiate the learners to intuitive / imaginative solution building processes as a complimentary skill set
- Scaling up the process of creating digital learning content in the realm of AI & DS underpinning the theories of cognitive science and virtual / augmented reality techniques
- Design and create a supply chain of human capital with high degree of intellectual/ emotional and spiritual quotient to man the evolving National economies.
- Equip students with multi-disciplinary skill sets to offer solutions to real time problems through initiating them to the process of research and innovation
- To create an academic environment for higher learning, lifelong learning, academic excellence, and research endeavours.
- Design ways and means of initiating learners to acquire high level of mathematical integrity and analytical competency.
- Training the learners to develop emotional integrity, interpersonal Intelligence, and intrapersonal intelligence to make them evolve as a Human capital for the society at large.
- Sensitising learners about sustainable development process, resilience of systems, and desirability of influencing the evolving world order to optimise wealth and value creation for the mankind.

PROGRAM EDUCATIONAL OBJECTIVES (PEO's)

PEO I:

Graduate shall develop actionable competency in the realm of Artificial Intelligence & Machine Learning, Data Analytics, and Blockchain

PEO II:

Graduates shall be inducted in the supply chain of human capital to transcend current level of research in AI and Data Science.

PEO III:

Graduates shall be industry ready to man the ever increasing and accelerated demand of Information Technology behemoths in the national and global space to build intelligence solutions in the technology marketplace.

PEO IV:

Graduates will exhibit professional ethics and moral value with the capability of working as an individual and as a team to contribute to further the cause of industry and society at large.

PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

PO's	OUTCOMES
PO1	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4	Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
PO6	The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10	Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11	Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: The ability to conceptualise, formulate, design, analyse and create solutions underpinning the knowledge of human cognition, Digital-Computational technologies, Artificial Intelligence and Data Science in terms of real-world problems to contribute to sustainable progress of mankind at large.

PSO2: The ability to apply knowledge of basic science, probability & statistics, computational algorithms to carryout research to contribute the body of knowledge in the realm of computer science/engineering and Artificial Intelligence & Data Science.

STUDENT's INFORMATION

Project Title: Develop Python program for Polynomial Regression model for the Cryptocurrency and validate the same using Pytorch.

	Student 1	Student 2	Student 3	Student 4
Student ID	2101091	2101121	2101109	2101114
Name	Mohammed Maviya Qureshi	Radha Tumbre	Anmol Singh	Kashik Sredharan
Class with Division	TE T22	TE T23	TE T22	TE T23
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INSTRUCTIONS TO STUDENTS

- The logbook must be submitted to the Guide or Co-Guide for verification and evaluation of project activities at least once in a week.
- Log book duly signed by guide must be submitted with project report for evaluation at the end of semester to the department.

DECLARATION

I declare that this project represents my ideas in my own words without plagiarism and wherever others' ideas or words have been included. I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my project work. I promise to maintain minimum 75% attendance, as per the University of Mumbai norms. I understand that any violation of the above will be cause for disciplinary action by the Institute.

Yours Faithfully

1. Mohammed Maviya Qureshi

2. Radha Tumbre

3. Anmol Preet Singh

4. Kashik Sredharan

(Date & Signature of Students)

LETTER OF ACCEPTANCE

I undersigned, Dr. G. T. Thampi working in Artificial Intelligence and Data Science Department, is willing to guide the project titled “DEVELOP PYTHON PROGRAM FOR POLYNOMIAL REGRESSION MODEL FOR THE CRYPTOCURRENCY AND VALIDATE THE SAME USING PYTORCH” for the Mini-Project-2 (A) Semester VI respectively for the Academic Year 2023-24.

The names of the students are:

1. Mohammed Maviya Qureshi
2. Radha Tumbre
3. Anmol Preet Singh
4. Kashik Sredharan

(Project Guide)

(Mini – Project Coordinator)

(HOD – AI & DS)

COURSE OUTCOMES

CO No.	Course Outcome	POs Covered	PSOs Covered
CO1	Identify problems based on societal / research needs.	PO1, PO3, PO5	PSO1, PSO2
CO2	Apply Knowledge and skill to solve societal problems in a group.	PO1, PO3, PO7, PO8, PO11, PO12	PSO1, PSO2
CO3	Develop interpersonal skills to work as member of a group or leader.	PO5, PO8, PO9, PO10, PO11	PSO1, PSO2
CO4	Draw the proper inferences from available results through theoretical/ experimental/simulations.	PO1, PO3, PO5, PO7, PO8, PO11, PO12	PSO1, PSO2
CO5	Analyze the impact of solutions in societal and environmental context for sustainable development.	PO3, PO6, PO7, PO11, PO12	PSO1, PSO2
CO6	Use standard norms of engineering practices.	PO1, PO2, PO3, PO5, PO7	PSO1, PSO2
CO7	Excel in written and oral communication.	PO11, PO12	PSO1, PSO2
CO8	Demonstrate capabilities of self-learning in a group, which leads to lifelong learning.	PO11, PO12	PSO1, PSO2
CO9	Demonstrate project management principles during project work.	PO2, PO4, PO6	PSO1, PSO2

CO – PO – PSO MAPPING

[illegible]

SCHEDULE FOR MINI PROJECT

Date	Week	Contents	Remark	Guide Sign
16-01-2024	1	Topic finalization	COMPLETED	
25-01-2024	2	Understanding and brainstorming	COMPLETED	
30-02-2024	3	Extracting the dataset	COMPLETED	
07-02-2024	4	Learning about Polynomial Regression	COMPLETED	
16-02-2024	5	Diving deep into various types of Polynomial Regression	COMPLETED	
20-02-2024	6	Data Preprocessing & Scaling	COMPLETED	
22-02-2024	7	Building the Polynomial Regression Model from scratch.	COMPLETED	
29-02-2024	8	Review – 1 and Presentation	COMPLETED	
15-03-2024	9	Learning about PyTorch	COMPLETED	
20-03-2024	10	Implementing Polynomial Regression on PyTorch	COMPLETED	
25-03-2024	11	Evaluating and comparing the results of both models	COMPLETED	
04-04-2024	13	Review – 2 and Presentation	COMPLETED	

PROGRESS / ATTENDANCE REPORT

Title of the Project: DEVELOP PYTHON PROGRAM FOR POLYNOMIAL REGRESSION MODEL FOR THE CRYPTOCURRENCY AND VALIDATE THE SAME USING PYTORCH.

Group No. 25	Name of Student 1: Mohammed Maviya Qureshi
	Name of Student 2: Radha Tumbre
	Name of Student 3: Anmol Preet Singh
	Name of Student 4: Kashik Sredharan
Name of the Supervisor/Guide: Dr. G. T. Thampi	

Sr. No	Date	Attendance				Progress/Suggestion	Mapping		
		1	2	3	4		CO	PO	PSO
1	16-01-2024	P	P	P	P	Topic finalization	1	1, 3, 5	1, 2
2	25-01-2024	P	P	P	P	Understanding and brainstorming	2	1, 3, 7, 8, 11, 12	1, 2
3	30-02-2024	P	P	P	P	Extracting the dataset	1, 2	1, 3, 5, 7, 8, 11, 12	1, 2

4	07-02-2024	P	P	P	P	Learning about Logistic Regression	1 – 3	1 – 12	1, 2
5	16-02-2024	P	P	P	P	Diving deep into various types of Logistic Regression	1 – 4	1, 3, 5, 7, 8, 9, 10, 11, 12	1, 2
6	22-02-2024	P	P	P	P	Building the project.	2, 5	1 – 12	1, 2
7	29-02-2024	P	P	P	P	Review – 1 and Presentation	2, 5	1 – 12	1, 2
8	15-03-2024	P	P	P	P	Learning about PyTorch	6, 7, 8	1, 2, 3, 5, 11, 12	1, 2
9	20-03-2024	P	P	P	P	Implementing Polynomial Regression on PyTorch		1, 3, 5, 7, 8, 11, 12	1, 2
10	25-03-2024	P	P	P	P	Evaluating and comparing the results of both models	4, 5, 6	1, 3, 5, 6, 7, 11, 12	1, 2
11	04-04-2024	P	P	P	P	Review – 2 and Presentation	2, 5	1-12	1, 2

Name, Date & Sign of Supervisor / Guide

REVIEW – 1 FORM

Group No: 25

Title of Mini – Project: DEVELOP PYTHON PROGRAM FOR POLYNOMIAL REGRESSION MODEL FOR THE CRYPTOCURRENCY AND VALIDATE THE SAME USING PYTORCH

Date of Review: 29-02-2024

No. of students in project team: 4

Student Mini-Project Performance Analysis (Put Tick as per your observation)

Excellent (3)		Very Good (2)		Good (1)	
Sr. No.	Observation	(3)	(2)	(1)	
1	Quality of problem and clarity				
2	Literature Survey				
3	Innovativeness in solutions				
4	Feasibility of the project				
5	Usage of technology				
6	Cost effectiveness and Societal impact				
7	Overall Presentation and Performance				
Comments:					

Project Guide & Panel Members Signature:

1) Dr. G.T .Thampi

2) Dr. Madhuri Rao

3)

Name, Date & Signature

(Project Coordinator)

Name, Date & Signature

(HOD – AI & DS)

REVIEW – 2 FORM

Group No: 25

Title of Mini – Project: DEVELOP PYTHON PROGRAM FOR POLYNOMIAL REGRESSION MODEL FOR THE CRYPTOCURRENCY AND VALIDATE THE SAME USING PYTORCH

Date of Review: 04-04-2024

No. of students in project team: 4

Student Mini-Project Performance Analysis (Put Tick as per your observation)

Excellent (3)		Very Good (2)		Good (1)
Sr. No.	Observation	(3)	(2)	(1)
1	Quality of problem and clarity			
2	Literature Survey			
3	Innovativeness in solutions			
4	Feasibility of the project			
5	Usage of technology			
6	Cost effectiveness and Societal impact			
7	Overall Presentation and Performance			
Comments:				

Project Guide & Panel Members Signature:

1) Dr. G.T .Thampi

2) Dr. Madhuri Rao

3)

Name, Date & Signature

(Project Coordinator)

Name, Date & Signature

(HOD – AI & DS)

EXAMINER'S FEEDBACK FORM

Name of External Examiner: _____

College of External Examiner: _____

Name of Internal Examiner: _____

Date of Examination: _____

No. of students in project team: 4

Availability of separate lab for the project: Yes / No

Student Mini-Project Performance Analysis (Put Tick as per your observation)

Excellent (3)		Very Good (2)		Good (1)	
Sr. No.	Observation	(3)	(2)	(1)	
1	Quality of problem and clarity				
2	Innovativeness in solution				
3	Cost effectiveness and Societal impact				
4	Full functioning of working model as per stated requirements				
5	Effective use of skill sets				
6	Effective use of standard engineering norms				
7	Contribution of an individual as member or leader				
8	Clarity in written and oral communication				
9	Overall performance				

- Can same mini project extend to next semester by adding new objectives/ideas? (Yes/No)
- If yes, suggest new Innovative Technique / Idea / Objectives related to this project.

Name, Date & Signature

(External Examiner)

Name, Date & Signature

(Internal Examiner)

Name, Date & Signature

(HOD – AI & DS)