

Student Diary (Log) Recording.

Name: Rutik Jayram Torambe

Reg No: 2020BEC014

Week	Dates	Activity	Description	Additional Remarks
1	18 Jan - 24 Jan	Project Planning and Requirement Analysis	<ul style="list-style-type: none">- Defined project scope and objectives- Gathered requirements and identified key functionalities	<ul style="list-style-type: none">- Understanding project scope and defining clear objectives- Requirement gathering techniques
2	07 Feb – 13 Feb	Literature Review and Technology Stack Selection	<ul style="list-style-type: none">- Reviewed research papers and articles on fake news detection.- Evaluated various machine learning algorithms and frameworks	<ul style="list-style-type: none">- Insights into current methodologies for fake news detection- Criteria for selecting appropriate ML algorithms
3	14 Feb – 20 Feb	Data Collection and Preprocessing	<ul style="list-style-type: none">- Collected datasets from various sources- Cleaned and preprocessed the data	<ul style="list-style-type: none">- Techniques for data cleaning and preprocessing- Importance of quality data in ML projects
4	21 Feb – 27 Feb	Exploratory Data Analysis (EDA)	<ul style="list-style-type: none">- Conducted EDA to understand data distribution and patterns- Visualized data using matplotlib and seaborn	<ul style="list-style-type: none">- Importance of EDA in uncovering insights- Tools and techniques for data visualization
5	7 Mar – 13 Mar	Model Training	<ul style="list-style-type: none">- Experimented with various ML algorithms (Passive-Aggressive, Random Forest, Navis-Bays classifier.	<ul style="list-style-type: none">- Basics of training and tuning ML models
6	14 Mar – 20 Mar	Model Selection	<ul style="list-style-type: none">- Trained initial models and evaluated performance	<ul style="list-style-type: none">- Model selection criteria based on performance metrics

7	21 Mar – 27 Mar	Model Tuning and Optimization	<ul style="list-style-type: none"> - Fine-tuned hyperparameters for selected models - Improved model performance through cross-validation 	<ul style="list-style-type: none"> - Techniques for hyperparameter tuning - Cross-validation methods
8	28 Mar – 3 Apr	Model Evaluation and Validation	<ul style="list-style-type: none"> - Evaluated model using test dataset - Validated model performance using confusion matrix, precision, recall, and F1-score . 	<ul style="list-style-type: none"> - Evaluation metrics for classification models - Interpreting confusion matrix results
9	4 Apr – 10 Apr	Flask Integration	<ul style="list-style-type: none"> - Integrated trained model into Flask application . 	<ul style="list-style-type: none"> - Flask for web development
10	11 Apr – 17 Apr	User Interface (UI) Design	<ul style="list-style-type: none"> - Designed front-end interface using HTML, CSS, and JavaScript - Integrated UI with Flask API 	<ul style="list-style-type: none"> - Received feedback on UI design for improvements .
11	22 Apr – 28 Apr	Testing and debugging	<ul style="list-style-type: none"> - Conducted end-to-end testing of the application - Debugged issues and refined application functionality . 	<ul style="list-style-type: none"> - Application now runs smoothly with minimal bugs .
12	29 Apr – 5 May	Finalize project and prepare for presentation	<ul style="list-style-type: none"> - Conducted final testing. - Fixed bugs and issues. - Prepared presentation materials (slides with features, functionalities, learnings). - Developed demo of the Fake news classifier model 	Reviewed project documentation and codebase.

Signature of Supervisor