Lesson Plan: AI Projects (Grade 9–10)

Teacher Training Guide · Module 5 of 15 · CHERIEDU Academy

Lesson Overview

Field	Details
Grade	Grade 9 & 10
Duration	120 minutes over 3 periods
Topic	End-to-end mini AI project using Python + Google Colab
Objective	Students run a real ML pipeline: data !' train !' predict
Materials	Laptops, Google accounts, Google Colab (free)

Project: Predicting Student Marks

Students will use a sample dataset of study hours vs exam marks to train a simple Linear Regression model — then predict their own exam score.

Period 1: Data Exploration (40 min)

1. Open Google Colab. Upload the provided CSV file (study_hours.csv).
2. Run code to display first 10 rows of data.
3. Plot a scatter chart: x = study hours, y = exam score.
4. Discuss: What pattern do you see? Is it linear?

Period 2: Train the Model (40 min)

1. Split data: 80% training, 20% testing.
2. Import LinearRegression from sklearn.
3. Fit the model on training data.
4. Print the model's accuracy score on test data.

Period 3: Predict & Reflect (40 min)

1. Each student enters their own study hours — get a predicted score.
2. Compare predictions with actual recent test scores.
3. Discuss: Why might the prediction be wrong?
4. Present findings to class in 2-minute "data stories".

Extension: Add More Variables

- Add "sleep hours" as a second feature. Does accuracy improve?
- Add "number of distractions". What does the model say?
- Discuss: Can AI really predict exam success? What does it miss?