"Airbnb Business Analysis Using Classical Machine Learning"

UAE Engineers Team – Weekly Meeting Notes

Week 1 – Project Kickoff & Team Contract

Date: 03 May 2025

- All members reviewed and signed the Team Contract and confirmed roles:
    - ✓ Fahad Saleh – Project Lead
    - ✓ Ali Yousef – Data Specialist
    - ✓ Jasim Alzaabi – Model Developer
    - ✓ Ali Alzahmi – Documentation Lead
    - ✓ Koulthoum Falmerzi – Report Lead
- Offered project title: Airbnb Business Analysis Using Classical Machine Learning.
- Communication was set up through a WhatsApp group and weekly meetings were scheduled on Fridays.
- Code was done in Jupyter Notebook and documentation in Word.

Name	Attendance status
Fahad Saleh	Attended
Ali Yousef	Attended
Jasim Alzaabi	Attended
Ali Alzahmi	Attended
Koulthoum Falmerzi	Attended

Week 2 – Data Understanding & Task Distribution

Date: 10 May 2025

- Ali Yousef presented the dataset for Airbnb including pricing, locations, reviews and others.

- The team held a discussion on application of supervised and unsupervised learning techniques.

- Koulthoum and Ali Alzahmi started writing the report's background and introduction.

- Jasim started testing preliminary models like Linear Regression and KNN.

- Fahad assessed the project timeline and confirmed deadlines for individual submissions.

Name	Attendance status
Fahad Saleh	Attended
Ali Yousef	Attended
Jasim Alzaabi	Attended
Ali Alzahmi	Attended
Koulthoum Falmerzi	Attended

Week 3 – Initial Modeling & Data Cleaning

Date: 17 May 2025

- Data imbalance limited performance of linear regression, a problem incurred by Jasim's first model.

- The team focused on enhancing the preprocessing stage and using advanced models like Decision Trees.

- Ali Yousef completed the tasks of handling missing values as well as data normalization and encoding for categorical variables.

- The team started to prepare visualizations for both presentation and analysis.

- Ali Alzahmi integrated the primary insights into the report draft.

Name	Attendance status
Fahad Saleh	Attended
Ali Yousef	Attended
Jasim Alzaabi	Attended
Ali Alzahmi	Attended
Koulthoum Falmerzi	Attended

Week 4 – Model Improvement & Integration

Date: 24 May 2025

- Jasim worked with different models: Decision Tree, Random Forest, and KNN.

- Random Forest produced the best performance and offered the most stable predictions.

- Peer review of the code was done, and updates were made through collaborative version control.

- Fahad monitored the results of competing models and advocated for extra validation tests.

- Koulthoum revised the results section and added relevant graphs and tables.

Name	Attendance status
Fahad Saleh	Attended
Ali Yousef	Attended
Jasim Alzaabi	Attended
Ali Alzahmi	Attended
Koulthoum Falmerzi	Attended

Week 5 – Report Drafting & Presentation Prep

Date: 31 May 2025

- Koulthoum and Ali Alzahmi drafted the report's most significant sections which included methodology, results and discussion.

- Visualizations were finalized by Jasim and Ali Yousef with additional statistical analyses included such as rental prices segmented by area and review score.

- Fahad confirmed that team objectives were being met and progress tracked.

- Work commenced on the PowerPoint presentation with the narrative sections assigned.

Name	Attendance status
Fahad Saleh	Attended
Ali Yousef	Attended
Jasim Alzaabi	Attended
Ali Alzahmi	Attended
Koulthoum Falmerzi	Attended

Week 6 – Final Review & Submission

Date: 07 June 2025

- The entire team worked on completing the project report and editing all sections of it.

- The final checks on the code were performed by Jasim and Ali Yousef to ensure all outputs were in sync with the reported results.

- Koulthoum structured the report according to the formatting requirements on citation and academic submissions.

- The whole team practiced for the final presentation focusing on the provided feedback.

- All materials including report and code were submitted before the due date.

Name	Attendance status
Fahad Saleh	Attended
Ali Yousef	Attended
Jasim Alzaabi	Attended
Ali Alzahmi	Attended
Koulthoum Falmerzi	Attended