CMPT 3830: Machine Learning Work Integrated Learning-1
Team Charter

1. Team Name:
Insight Data Analyst

2. Team Member details:
- Emem Antia, eantia@norquest.ca

- Monsurat Adejumo, madejumo118@norquest.ca

- Ayo Pedro, apedro@norquest.ca

- Bube Ohaneje, bohaneje@norquest.ca

3. Team Purpose:
To leverage machine learning techniques, market analysis, and data visualization to optimize vehicle sales by creating predictive and actionable insights. The team's mission is to deliver a robust pricing model that ensures dealerships can remain competitive and maximize revenue.

4. Team Goals:

- Long-term Goals:
Develop a fully functional regression model that accurately predicts vehicle pricing based on relevant characteristics. This will ensure the dealership can seamlessly adopt the model for strategic decision-making.

- Short-term Goals:

Data Collection and Preprocessing:
- Gather data on vehicle characteristics (e.g., year, make, model, mileage, condition).
- Identify and clean missing, duplicate, or inconsistent data entries.
- Engineer features such as the age of the vehicle or price per mileage to enhance model performance.
- Normalize or scale numerical data and encode categorical variables as needed.

Model Development:

- Build initial regression models (e.g., Linear Regression,).
- Evaluate model performance using appropriate metrics (e.g., RMSE, MAE, R^2).
- Split data into training and testing sets (e.g., 80-20 split) for validation purposes.

Insights and Visualization:

- Use visualization tools (e.g., Power BI, Tableau, or Python libraries like Matplotlib/Seaborn) to present key findings.
- Showcase the relationship between vehicle features and pricing to highlight model predictions.

Feedback and Refinement:

- Present the regression model to dealership stakeholders for feedback.
- Incorporate dealership-specific knowledge (e.g., regional pricing trends, customer preferences) into the model.
- Fine-tune hyperparameters or add new features based on feedback.

Documentation and Reporting:

- Create a detailed report summarizing the data preprocessing steps, model performance, and insights.
- Prepare a presentation or dashboard for stakeholders to explain model utility and recommendations.

5. Team Norms and Expectations:

- Communication Protocols:

Primary Communication Tool:

- **Microsoft Teams** will serve as the main platform for all team communications, including messages, video calls, and document sharing.

Response Time:

- Team members are expected to respond to messages within **12 hours** during working days to ensure smooth collaboration and task progress.

Meeting Guidelines:

- Schedule and join meetings through Teams.
- Provide agendas at least **24 hours** in advance to keep discussions focused and efficient.
- Record meetings and share summaries or key takeaways in the appropriate Teams channel for those unable to attend.

Channels and Organization:

- Team's channels will be used for specific topics (e.g., "Data Preprocessing," "Model Development," "Stakeholder Feedback").
- Relevant team members will be tagged to ensure clarity and accountability.

Urgent Communication:

- For time-sensitive issues, Teams chat will be used and messages marked as urgent to notify the recipient immediately.
- Follow up with a phone call if the matter requires immediate attention.

Documentation Sharing:

- Share and store important documents, reports, and updates in the appropriate Teams folders for easy access and version control.

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- Meeting Frequency:
Weekly meetings every Thursday from 9:30 am to 12:30 pm, with emergency meetings called via group consensus.

- Decision-making Process:
- Decisions will be made by majority vote after discussing all viewpoints.
- Critical issues require unanimous agreement.

- Conflict Resolution:
Disputes will be addressed by referring to the project's goals and consulting an impartial third party like our instructor (Md Mahbub Mishu) if unresolved internally.

6. Roles and Responsibilities:

- **Team Lead**: Emem Antia – Oversees project progress, coordinates meetings, and ensures deadlines are met.
- **Data Analyst:** *Bube Ohaneje* – Handles data collection, cleaning, and exploratory data analysis.
- **Model Developer:** *Emem Antia* – Builds and refines the regression model.
- **Visualization Specialist:** *Ayo Pedro* – Develops interactive dashboards and visualizations for insights presentation.
- **Documentation Lead**: *Monsurat Adejumo*– Manages documentation, including reports and meeting notes.

7. Communication Plan:

- Tools Used for Communication:
- Teams Chat and Slack will be used for discussions
- Teams Meeting for virtual meetings
- Norquest email for formal communications.

- File Sharing Method:
- **Primary Tool:** Google Drive will be used as the main platform for sharing and storing all documents, datasets, reports, and project-related materials.

- **Folder Structure**: Files should be organized into clearly labelled folders for easy navigation (e.g., "Datasets," "Reports," "Meeting Notes").

- **Access Control**: Team members will have edit access to shared folders, and permissions will be managed by the Team Lead to ensure data security.

- **Version Control:** All team members will ensure proper version naming (e.g., "Report_v1," "Dataset Updated") to maintain clarity and prevent overwriting files.

- Meeting Schedule:
This will be Weekly on Thursday from 9:30 am to 12:30 pm.

- Emergency meeting protocol:

Criteria for Emergency Meetings:

Call an emergency meeting only when:

- A critical issue arises that could jeopardize project timelines or deliverables.
- Immediate decisions are needed to resolve blockers.
- Urgent feedback from stakeholders or clients is required.

Initiation Process:

- Notify all relevant team members through **Microsoft Teams**, marking the message as urgent.

- Specify the reason for the emergency meeting, including key details and the outcome.

Scheduling:

- Schedule the meeting as soon as possible, aiming for a time within **2 hours** of the initial notification, depending on team availability.

- Use the Teams calendar to propose multiple time slots and allow for quick confirmations.

Duration:

- Keep emergency meetings short and focused, typically **15–30 minutes**, unless the issue requires more detailed discussion.

Attendance:

- Ensure attendance of only the essential team members or stakeholders directly involved in resolving the issue.

- Inform others about the outcomes afterward if they are not required to attend.

Follow-Up:

- Document the key decisions, actions, and timelines discussed in the meeting.
- Share a summary immediately after the meeting in the appropriate Teams channel.

8. Accountability:

- How progress will be tracked:

- **Tool Selection**: Loops or Asana will be used to assign and track tasks and milestones.
- **Weekly Updates:** Weekly updates will be provided during team meetings to ensure alignment and progress transparency.
- **Milestone Monitoring:** Asana or Loops will be used to track milestone completion and identify any delays in real time.

- How will team members be held accountable for tasks?

- **Immediate Notification:** Team members must notify the team as soon as they foresee an inability to meet a deadline.
- **Alternative Solutions:** Members should propose alternative solutions, such as task reassignment or deadline adjustments, to keep the project on track.
- **Support Mechanism:** Team members are encouraged to seek support from others if they encounter challenges, fostering collaboration and minimizing disruptions.
- **Review Meetings:** Regular review of assigned tasks will be incorporated to ensure adherence to deadlines and resolve any bottlenecks.

9. Signature of Commitment:

Name of the Member	Signature (Initials)	Date
Emem Antia	EA	January 23, 2025
Bube Ohaneje	BO	January 23, 2025
Monsurat Adejumo	MA	January 23, 2025
Ayo Pedro	AP	January 23, 2025