Our HR Insights Project: A Four-Week

 The team began the HR insights project with a clear and smart plan, aiming to complete all objectives within four weeks. From the very beginning, tasks were carefully organized, responsibilities assigned, and milestones set to ensure steady progress. Thanks to this structured approach, the project stayed on track, and all deliverables were completed exactly as planned. With the foundation laid and the timeline established, the team was ready transform raw HR data into actionable insights.

Week 1: Laying the Foundations
The journey began with a clear goal: understanding the stability of the company and uncovering factors that affect employee retention and attrition. The team started by structuring the raw HR data. A **SQL data model** was built as the backbone of the analysis, and **Python (pandas)** was used to clean and preprocess the data, transforming messy, incomplete datasets into a structured, reliable format.
Deliverables:

- Clean, structured dataset ready for analysis

- Data preprocessing notebook documenting all steps

Week 2: Asking the Right Questions
With the data prepared, the team focused on identifying the most crucial questions that could reveal hidden patterns in the workplace. Key factors such as **age, job role, marital status, gender, and frequency of business travel** were examined to understand their impact on retention and attrition. This step was essential for detecting potential issues that could destabilize the work environment and for proposing actionable improvements to enhance employee satisfaction.
Challenges faced: Narrowing broad observations into focused, measurable questions.
Deliverables:

- A clear set of analysis questions designed to uncover insights from the dataset

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Week 3: Visualizing Insights
The team then turned data into visuals. Using **Power BI**, charts and plots were created to answer the defined questions, while forecasting techniques helped anticipate trends in retention and attrition. This stage transformed raw numbers into stories that could guide management decisions and workplace improvements.

Challenges faced: Translating complex data into simple, actionable visualizations that could be easily interpreted.
Deliverables:

- Visualization plots addressing key analysis and forecasting questions

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Week 4: Building the Final Picture

The final week brought all efforts together. A **Power BI dashboard** was developed to provide a dynamic view of insights, making it easier to track and monitor employee stability. Alongside the dashboard, a **final report and presentation** were prepared to summarize findings and recommendations. The team also developed an **AI model to predict employee attrition**, enabling proactive management of at-risk employees and contributing to a healthier, more productive work environment.
Challenges faced: Coordinating team efforts into a cohesive story and ensuring the AI model was accurate and interpretable.
Deliverables:

- Power BI visualization dashboard

- Final report and presentation

- AI-based attrition prediction model

Reflection:

Over four weeks, the team successfully transformed raw HR data into actionable insights, overcoming challenges in data quality, question framing, visualization, and predictive modeling. The project strengthened technical skills in **SQL, Python, and Power BI**, while highlighting the value of collaboration, problem-solving, and data-driven decision-making to create a more stable, productive, and employee-focused work environment.