

Key Processes and Methods – Attrition Analytics Dashboard Project

1. Data Preparation and Cleaning

- Imported and consolidated a dataset of **1,470 employee records** with **44 attributes**.
 - Standardized data formats (e.g., gender, education, departments).
 - Removed inconsistencies and missing values for clean analysis.
 - Created derived fields such as **age bands** and **attrition flags** for grouping and aggregation.
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2. KPI Identification and Calculation

- Defined key performance indicators to measure workforce health:
 - **Total Employees:** 1,470
 - **Attrition Count:** 237
 - **Active Employees:** 1,233
 - **Attrition Rate:** 16.12%
 - **Average Age:** 36.9 years
 - **Average Job Satisfaction:** 2.63 / 4
 - Highlighted KPIs visually at the top of the dashboard for quick insights.
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3. Data Analysis and Aggregation

- Conducted **descriptive and comparative analytics** using Excel PivotTables.
 - Analyzed attrition across multiple dimensions:
 - **Department:** Highest attrition in R&D (133 employees).
 - **Job Role:** Highest in Laboratory Technicians (62 employees).
 - **Gender:** Males experienced higher attrition (150 employees).
 - **Marital Status:** Single employees showed the highest turnover (120 employees).
 - **Education Field:** Life Sciences recorded the most attrition (89 employees).
 - Derived correlations between **job satisfaction, age, and attrition patterns**.
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4. Dashboard Development and Visualization

- Built an **interactive Excel dashboard** using PivotCharts, slicers, and KPI cards.
- Included visualizations for:

- Attrition by department, job role, gender, age, and education.
 - Workforce demographics and satisfaction indicators.
 - Added **dynamic filters** for **Department** and **Education Level** to enable detailed exploration.
 - Designed the layout for clarity — KPIs at the top, detailed visuals below.
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5. Insight Generation and Interpretation

- Identified **younger, single, and technical employees** as the highest-risk groups.
 - Found a clear link between **low job satisfaction** and **higher attrition**.
 - Highlighted the need for **career development, recognition programs, and balanced workloads** in high-turnover roles.
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6. Strategic Application and Reporting

- Summarized insights into actionable HR strategies for reducing turnover.
 - Recommended **predictive analytics integration** for proactive attrition forecasting.
 - Established a **quarterly dashboard refresh process** for continuous monitoring and HR decision support.
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