**Business Analyst Intern Assignment**

**Instructions**

**1. Data Cleaning and Validation**

* Identify and correct invalid email formats.
* Handle missing values appropriately.
* Detect and remove duplicate records.
* Standardize data formats, including phone numbers and zip codes.
* Validate phone numbers to ensure they follow the correct Indian format:
* Begin with digits 6–9.
* Remove any extra symbols or characters (e.g., parentheses, spaces) from the phone numbers.
* Flag phone numbers that are too short or invalid for review.

**2. Data Analysis**

* Analyze customer distribution by region, state, and industry.
* Calculate the average total purchases per customer segment.
* Identify the top-performing products by revenue.

**3. Optional**

* Analyze cross-selling possibilities to suggest potential opportunities for increasing sales.

**4. Data Visualization**

* Create insightful and relevant visualizations to support your analysis.
* Visualizations can include bar charts, pie charts, heatmaps, or other appropriate formats.

**Deliverables**

* A cleaned and validated version of the dataset.
* A summary of your analysis and key findings.
* Visualizations supporting your analysis in a presentation or a report format.

**Submission**

Please submit your completed assignment by 27th March 2025 to [recruit@inkarp.co.in](mailto:recruit@inkarp.co.in) or reply all to assignment mail. Ensure your submission includes all the required files and a brief write-up explaining your approach.

We look forward to reviewing your work! If you have any questions or need clarification, feel free to reach out.