**Amazon Sales Analytics Hub: Exploring Product Data**

**BANA 8083 - 006 MS Capstone Project**

**Project Title:** Amazon Sales Analytics Hub: A Comprehensive Exploration of Product Data

**Project Description:** This project focuses on developing an interactive platform that provides detailed analysis and visualization of sales data across various product categories on Amazon. The goal is to offer actionable insights to help retailers understand customer preferences, optimize pricing strategies, and evaluate product performance.

**Developed By:** Bharath Marturu  
**Email:** marturbh@mail.uc.edu  
**LinkedIn:** [Bharath Marturu](https://www.linkedin.com/in/bharath-marturu-6b08b3a8/)  
**Program:** Masters in Business Analytics  
**University:** University of Cincinnati  
**Course:** BANA 8083 - 006 MS Capstone  
**Instructor:** Dr. Yan Yu

**Primary Reader:** Dr. Yan Yu  
**Position:** Professor, Department of Operations, Business Analytics, and Information Systems  
**University:** University of Cincinnati  
**Email:** yuyu@ucmail.uc.edu

**Secondary Reader:** Professor Delmer "Bill" Nicholson  
**Position:** Assistant Professor, Department of Operations, Business Analytics, and Information Systems  
**University:** University of Cincinnati  
**Email:** nicholdw@ucmail.uc.edu

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**Abstract**

The "Amazon Sales Analytics Hub" project aims to develop an interactive platform for analyzing and visualizing sales data across various Amazon product categories. It addresses challenges faced by retailers, such as understanding customer preferences, refining pricing strategies, and evaluating product performance. The platform provides real-time insights, enabling comparisons of product categories, pricing and discount trends, and rating distributions. Key features include detailed correlation analyses, custom analyses, and downloadable reports with visualizations.

The project utilizes technologies like Python with Pandas, Scikit-learn, Matplotlib, Seaborn, Tableau, and Streamlit, hosted on Streamlit Cloud. The primary dataset, sourced from Kaggle, includes comprehensive data on product names, categories, ratings, prices, and discounts. Analysis highlights high engagement in categories like cameras and significant discounts in football products. The platform's scalability allows for future data updates, aiding retailers in optimizing sales strategies and enhancing the customer experience on Amazon.

Beyond the technical aspects, the Amazon Sales Analytics Hub emphasizes user experience by offering an intuitive interface that simplifies complex data exploration. The platform supports various stakeholders, including business analysts, marketers, and decision-makers, by providing actionable insights that can directly influence business strategies and outcomes. This holistic approach ensures that users can easily access and interpret the data, making the tool valuable for both immediate decision-making and long-term strategic planning.

This project, part of the BANA 8083 - 006 MS Capstone at the University of Cincinnati, demonstrates the practical application of data analytics in solving real-world challenges for online retailers.

Data Source - [Amazon Products Sales Dataset](https://www.kaggle.com/datasets/lokeshparab/amazon-products-dataset)

Application URL - [Amazon Sales Analytics Hub](https://amazondataanalysis.streamlit.app/)

GitHub URL - [Amazon Sales Analytics GitHub](https://github.com/Bharath369/amazon_product_analysis)