

Report: Bike Sales

Mid-Term

I chose bike sales from Kaggle since I'm interested in the physical product business and I have a second job at the local YMCA as a zumba and aqua part-time instructor. Bike sales mixed my love of exercise and physical sales business. I began by manually cleaning using excel and more refined cleaning using formulas in excel documented on the data info and process tab on the analysis excel version of the dataset. After cleaning the data, I created a CSV version of the dataset to input to SQL for more in depth analysis. After the excel analysis it looked like the sum of cost was higher than sum of true profit. So I focused on the following 3 questions for the SQL analysis:

- **Which bike was most profitable?**
- **Who is the target audience by profit?**
- **Where (location) is the target audience by profit?**

The overall analysis of bike sales data showed that the Mountain-200 Black, 46 is the single most profitable product, due to an exceptionally high profit margin of 95.53% of its cost. The primary target audience driving the highest profit volume is Adults (35-64) in California. Growth recommendations include focusing marketing efforts on the Mountain-200 line to the Adult (35-64) skew a little to female demographic and prioritizing inventory and distribution into the high-yield markets of California, Washington, and Australia.

The Mountain-200 Black, 46 is the champion bike by both total profit and profit margin, making it a critical asset. The data reveals the United States, specifically California, is the highest-value individual market, accounting for over half of the country's profit. The combination of high-value states in the US (California, Washington) and Australia (NSW, Queensland) creates a clear geographical focus. Adults aged 35-64 are the overwhelming profit driver of bike sales. Marketing for the Mountain-200 line can be split, with a strong focus on females for the 46cm Black model and males for the 38/42cm Black models.

I would focus on the top 5-7 profitable bikes and scrape the other models or charge a premium custom order of non-top profitable bikes to cut on cost. Also, double production of top bike by profit. The United States, specifically California, is the highest-value individual market, accounting for over half of the country's profit. I would

create a marketing campaign that focuses on California, hosting bike races/ fundraisers in California. I would also create a biking scavenger race where contestants take pictures at landmarks all over California with an offer of 15% off bike accessories. The combination of high-value states in the US (California, Washington) and Australia (NSW, Queensland) creates a clear geographical focus.