

Project Documentation: AMD Evolution

1. Project Overview

AMD Evolution is a data analysis project focused on AMD, a global leader in processor and GPU manufacturing. AMD was selected due to its rapid growth and competitive edge against major companies like Intel and Nvidia. The project analyzes product categories including Ryzen (consumers), Threadripper (professionals), and EPYC (servers).

2. Data Sources

Data was collected from diverse and trusted sources such as AMD's official website, TechPowerUP, WikiVersus, Nano Reviews, and market research reports. It was then organized into a MySQL database and exported to Excel for ease of processing.

3. Data Structure

The dataset included the following key fields:

- Product Name
- Category
- Price
- Release Date
- Revenue
- Sales Rates

4. Tools Used

Various tools were used throughout the project:

- MySQL for database creation and data entry
- Excel for basic cleaning and formatting

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- Python (Pandas) for data analysis
- Power BI for interactive dashboards
- Claude/ChatGPT for coding support and error solving

5. Challenges

Several challenges were encountered, including missing or inconsistent data that required manual cleaning.

Another challenge was narrowing down key metrics to avoid distractions due to the large dataset.

6. Results & Dashboard

An interactive dashboard was built using Power BI, showcasing critical insights such as:

- Top-selling products
- Price trends over time
- Performance comparison with competitors

7. Key Learnings

This project provided hands-on experience with real-world data and enhanced skills in:

- Data collection and cleaning
- Multi-tool integration
- Building professional dashboards for business decision-making