Executive Summary

This project focuses on applying Generative AI and Data Analytics to solve a real-world business challenge faced by small e-commerce businesses: the inability to understand customer behaviour, analyse sales trends, and make data-driven decisions for growth. Within the 24-hour GenAI Hackathon framework, I developed a comprehensive analytical solution that integrates multiple AI tools, interactive dashboards, and automated insights to create a practical business intelligence ecosystem.

The project began with the creation of a synthetic e-commerce sales dataset using ChatGPT, followed by exploratory analysis and visualisation conducted through Google Sheets and Power BI. Ten Power BI visualisations—including cards, stacked column charts, a line chart, and a clustered bar chart—were designed to interpret sales performance, customer patterns, product categories, and revenue distribution. These visual components form the analytical core of the project, highlighting how AI-assisted tools can simplify decision-making for small businesses.

To ensure a multi-platform, AI-integrated solution, several additional components were developed. A Dorik AI-based website was created to present the project, including sections for dataset insights, dashboard visuals, videos generated through Sora AI, and an interactive layout that explains the use case in a structured manner. Canva AI was used to design an infographic summarising the insights, while Figma was employed to create a user interface prototype aligned with the final dashboard and website design. A detailed mind map was produced using Miro to visually depict the problem, solution flow, tools used, and system architecture.

A fully functional AI chatbot was built using Poe, allowing users to interact with the business problem through natural language queries. JupyterLab was used to explore the dataset in an AI-assisted environment, adding another layer of analytical depth. All files—including prompts, dataset, dashboards, and documentation—were systematically organised in a GitHub repository to ensure transparency, accessibility, and version control.

Together, these deliverables demonstrate a complete AI-driven analytics pipeline: from data creation and exploration to visualisation, automation, user interaction, and web deployment. The project showcases how small businesses can leverage Generative AI tools to access meaningful insights without technical expertise. It also reflects my ability to integrate multiple AI platforms in a cohesive, outcome-oriented manner within the constraints of a 24-hour hackathon.