Name: Haris Sumra

Capstone Project Proposal

**Project # 1:**

Title: Risk-Averse Wealth Harmony: Orchestrating Optimal Stock Portfolios through Data-Driven Optimization

This project delves into the realm of stock portfolio optimization, employing sophisticated techniques to construct a model aimed at recommending an optimal blend of stocks for investors. Leveraging portfolio optimization methodologies, the project seeks to strike a balance between maximizing returns and minimizing risks. By analyzing historical stock performance, volatility, and correlation data, the model aims to identify the most efficient allocation of assets. The application of mathematical optimization, coupled with financial analytics, provides a systematic approach to navigate the complexities of the stock market. Ultimately, the project endeavors to empower investors with a data-driven tool that enhances their decision-making process, fostering a more strategic and risk-aware approach to stock portfolio management.

**Project # 2:**

Title: "Harmony in Speech: A Data-Driven Symphony of Precision for Advancing Speech Language Pathology"

This data science project in the field of Speech Language Pathology (SLP) focuses on leveraging advanced computational techniques to enhance diagnostic and therapeutic processes for individuals with speech and language disorders. By employing machine learning algorithms and natural language processing, the project aims to analyze large datasets of speech samples, clinical notes, and patient histories to identify patterns and correlations that can aid in the early detection and personalized treatment of speech disorders. The ultimate goal is to develop predictive models that not only assist SLP professionals in accurate diagnosis but also contribute to the optimization of intervention strategies tailored to the unique needs of each individual. This interdisciplinary approach combines expertise in data science with the specialized knowledge of speech pathology, showcasing the potential for innovative advancements in the assessment and treatment of communication disorders.

Hi I am haris sumra and my wife is