Project Plan Presentation

The Capstone Experience

Team UWM

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Project Sponsor Overview

• #1 Wholesale lender & mortgage lender in US
• Over 7000 team members on-site in Pontiac, MI
• Provides mortgage products to mortgage brokers
• CEO is Mat Ishbia: former walk on MSU point guard
Project Functional Specifications

• Consolidate data from multiple systems into single comprehensive DataMart
• Develop a model that assesses risk associated with each software change
• Allows team leaders to make informed decisions about development risks and monitor team performance.
Project Design Specifications

• Line graph displaying critical, medium, low risks
• List of recent risks, along with AI confidence
• Team distribution pie chart
• Team overview list showcasing best/worst teams
• UI options to filter data
Screen Mockup: Dashboard

[Image of a dashboard with various sections and data visualizations, including a pie chart, line graph, and table with risk predictions.]
Screen Mockup: Adding Teams
Screen Mockup: Pie Chart
Screen Mockup: Data Dropdown
Screen Mockup: Team performance
Project Technical Specifications

• Legacy Architecture (Phase 1)
• Microsoft Machine Learning Studio Classic
• Microsoft SQL Server Management
• Visual Studio 2022 integration with Azure Cloud Services
Project System Architecture
Project System Components

• Hardware Platforms
  ▪ Company laptops

• Software Platforms / Technologies
  ▪ Data sources: Bitbucket, Jira, Octopus, Harness, ServiceNow
  ▪ Microsoft SQL Server Management Studio
  ▪ Microsoft Machine Learning Studio (classic)
  ▪ Visual Studio 2022 - C#
Project Risks

- **DataMart**
  - Risk: Data is spread across multiple different systems
  - Mitigation: Create a centralized DataMart
- **Outdated Software**
  - Risk: Using Microsoft Machine Learning Studio Classic is older, not as good for customizable ML
  - Mitigation: Research alternate options such as Azure Machine Learning (Newer One)
- **Azure Machine Learning**
  - Risk: Unfamiliar with Azure Cloud, Machine Learning Services
  - Mitigation: In touch with UWM support team, use resources provided
- **Potential gaps in data**
  - Risk: There could be gaps in data if they were not using a particular software at a certain time
  - Mitigation: Figure out a way to discard irrelevant data without inducing bias
Questions?