

MICHIGAN STATE
UNIVERSITY

Project Plan Presentation
Feedback Prompt for Ratings in
Google Play Store
The Capstone Experience

Team Microsoft

Justin Hollinshead

Jordan Hybki

Karn Jongnarangsin

Moez Khan

Department of Computer Science and Engineering

Michigan State University

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From Students...
...to Professionals

Functional Specifications

Promote User Feedback

- Prompt users for their feedback within the Android version of Microsoft's Intune Company Portal application
- Improve Feedback Data Analysis
 - Supply our client with enhanced review sentiment analysis for both Intune and its main competitors
- Automate Analysis Report Delivery
 - Automatically send feedback analysis reports to developers through an interface



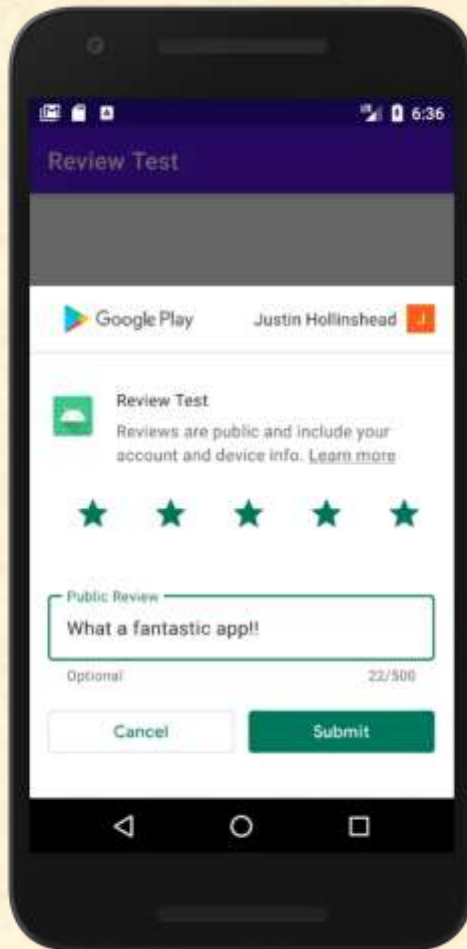
Design Specifications

- In-App Review Prompt
 - Upon a new device enrollment, users will automatically be prompted to leave a rating & review inside the application
- Feedback Analysis Reports
 - Easily understandable rating & sentiment analysis showcased visually with charts & graphs
- Microsoft Teams Bot
 - Automated bot that outputs reports directly to the client via Microsoft Teams & email

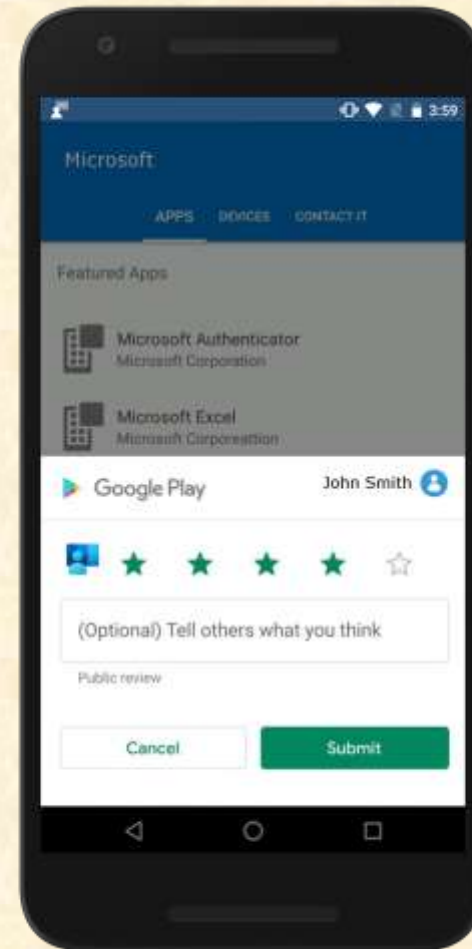


In-App Review Prompt

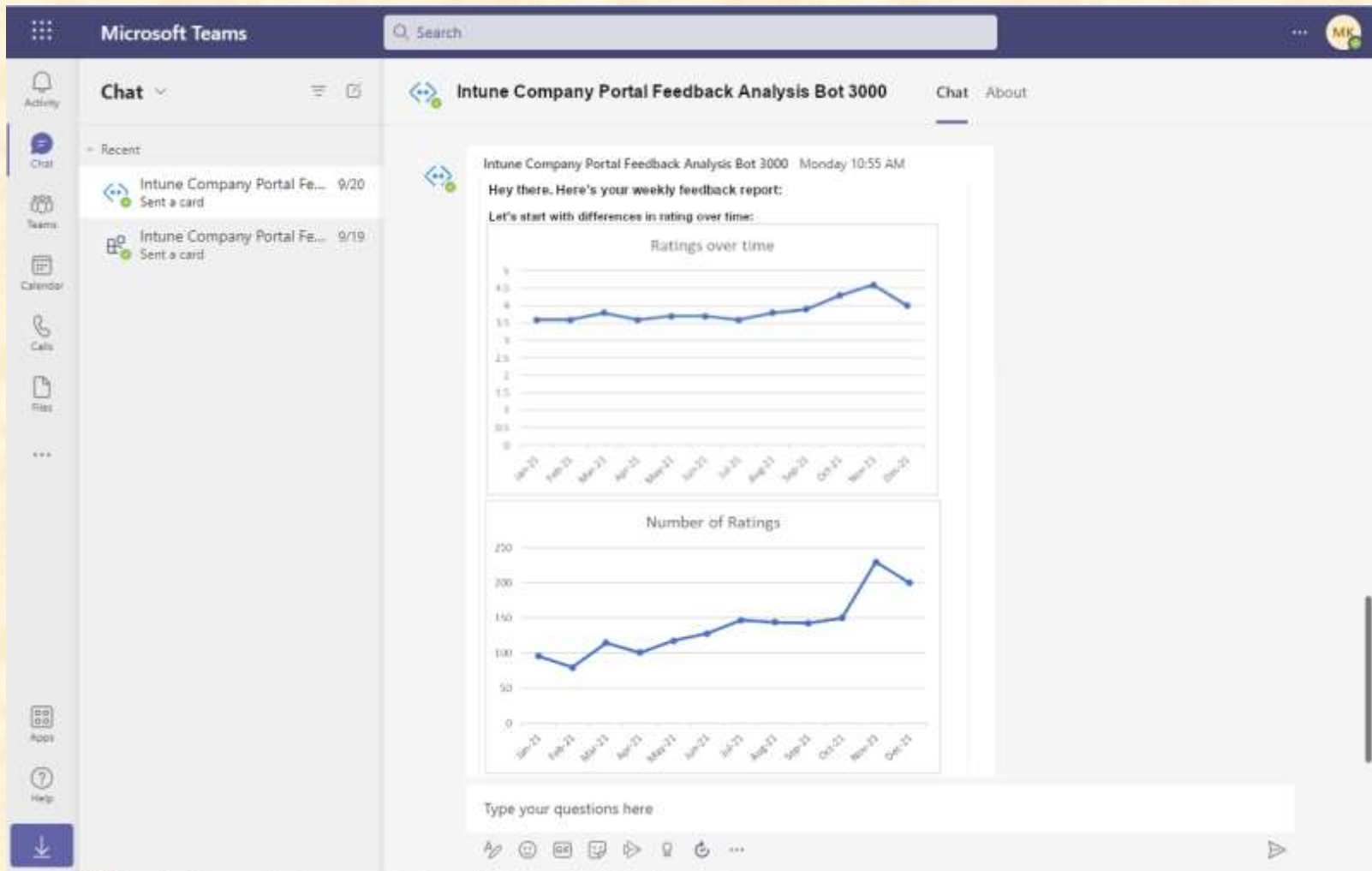
Sample Application



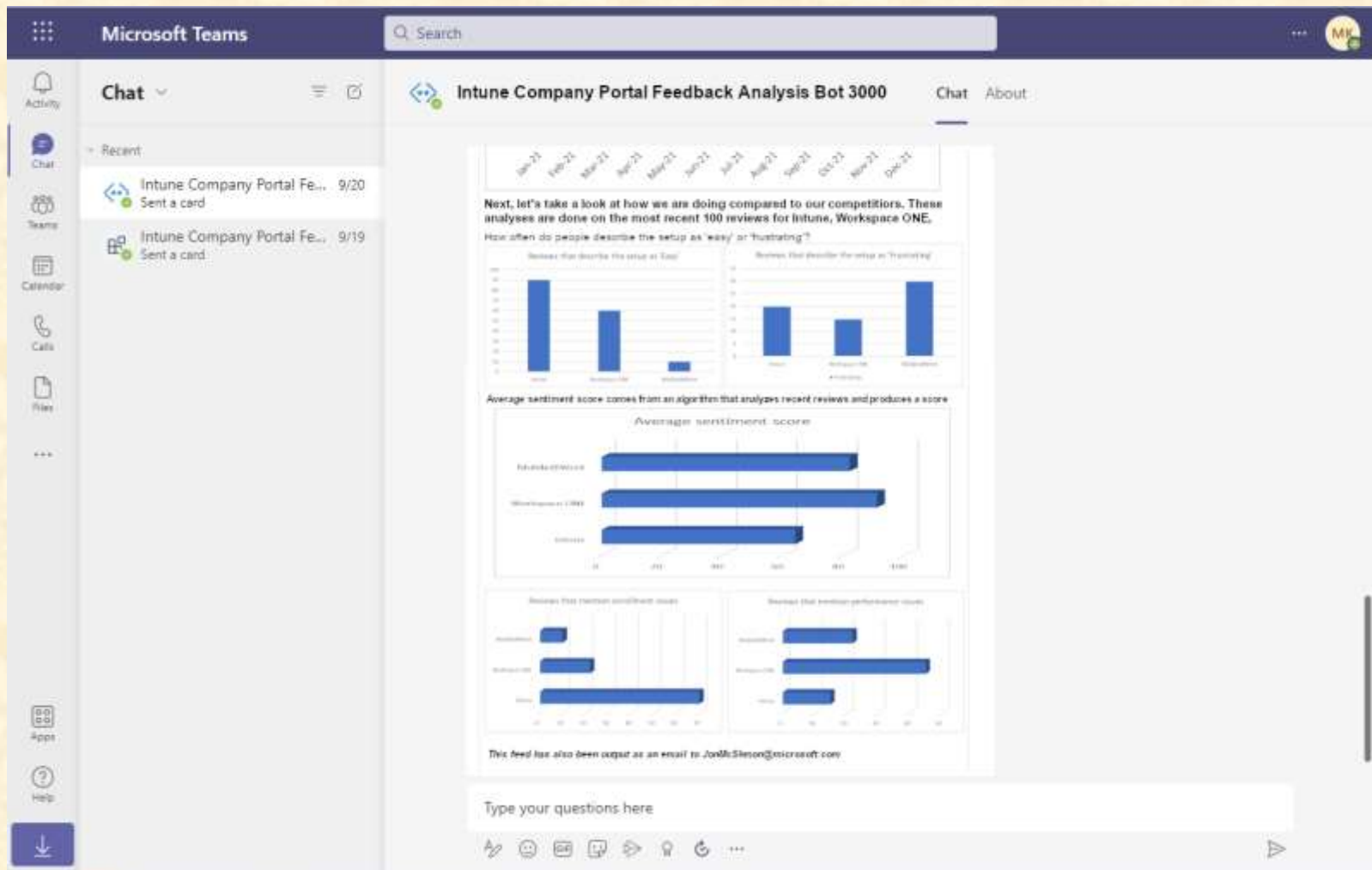
Intune Company Portal



Feedback Analysis Report 1



Feedback Analysis Report 2



Feedback Analysis Report Email

The screenshot displays an Outlook email window. The subject line is "Intune Company Portal Feedback Analysis Bot 3000 Generated Report". The email content includes a line graph titled "Ratings over time" and a bar chart titled "Number of Ratings".

Ratings over time

Date	Rating
Mar 20	4.0
Mar 21	4.0
Mar 22	4.2
Mar 23	4.0
Mar 24	4.1
Mar 25	4.1
Mar 26	4.0
Mar 27	4.1
Mar 28	4.2
Mar 29	4.3
Mar 30	4.4
Mar 31	4.2

Number of Ratings

Date	Number of Ratings
Mar 20	100
Mar 21	90
Mar 22	120
Mar 23	100
Mar 24	110
Mar 25	120
Mar 26	130
Mar 27	140
Mar 28	140
Mar 29	140
Mar 30	140
Mar 31	250
Apr 01	200

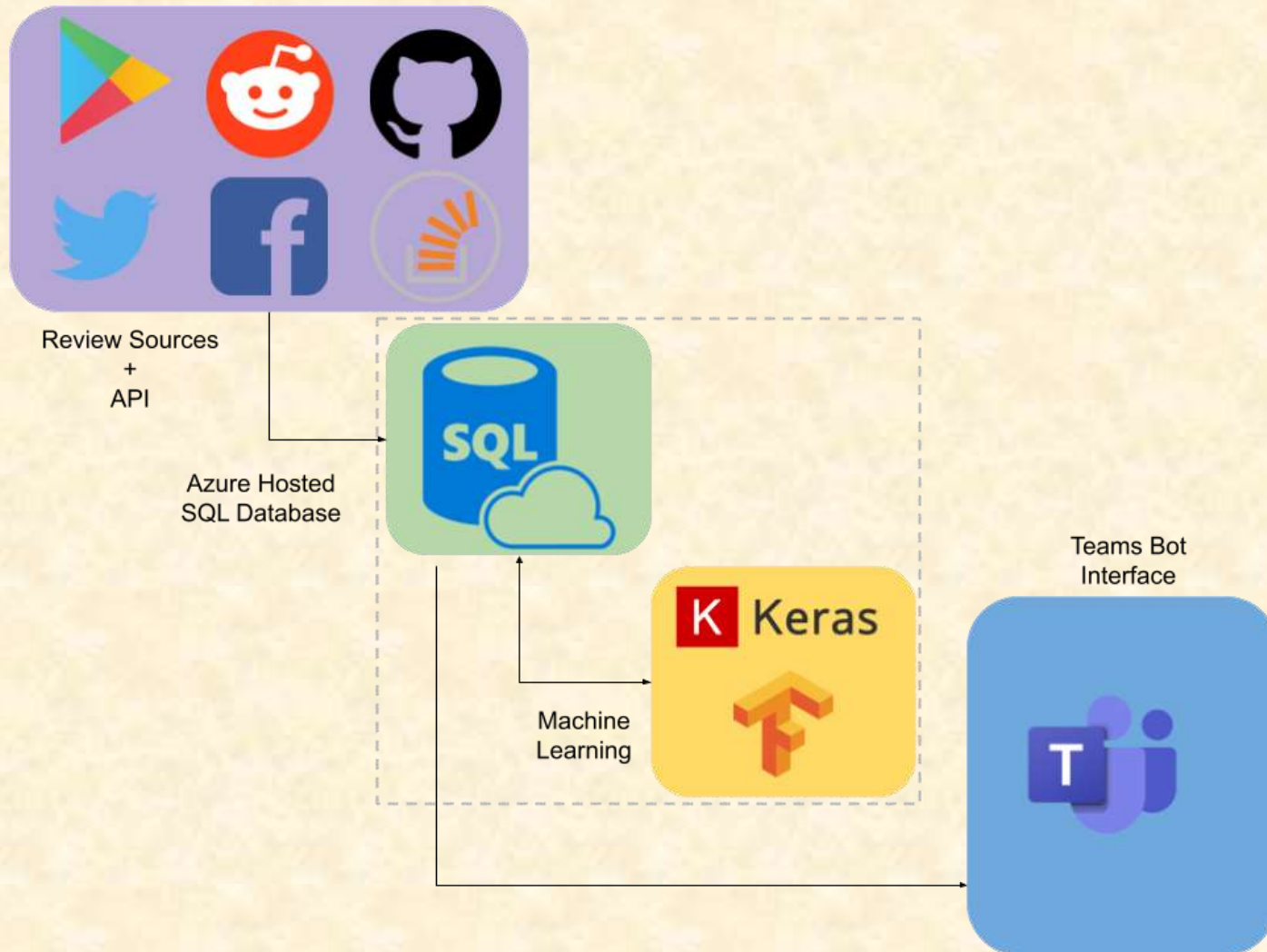


Technical Specifications

- In App Review:
 - User is prompted in the Microsoft Intune app to leave a review of the Android Company Portal.
 - Display only once per user.
 - Can be switched on/off.
- Google Play Store Analysis:
 - Collate sentiment and reviews over time analysis.
 - Compare against competitors (Workspace ONE and Mobile@Work).
 - Sent to end users via Microsoft Teams Bot and Email.



System Architecture



System Components

- Software Platforms / Technologies
 - Azure Cloud Services. (Pipeline, Repos, SQL Database, Machine Learning)
 - Tensorflow/Keras.
 - Node.js. (Web Scraping and SQL interfacing)
 - Google Play Store, Facebook, Twitter, Reddit, GitHub, Stack Overflow API.
 - Kotlin/Android SDK.
 - Microsoft Bot Framework.



Risks

- Representative Training Data
 - Natural Language Processing requires suitable data to create a model that can make accurate predictions, data that poorly represents testing data can lead to inaccurate models that are not helpful
 - Comprehensive acquisition of data early on, adjusting combinations of training data to optimize model accuracy
- Passing Data Through Systems
 - Multiple systems using data in their own ways (scraping, storing, analyzing, etc.), data will need to be passed seamlessly from one system to the next
 - Early discussion, research, and implementation of systems communications to determine what will or won't require workarounds or fixes
- Source Code Access Could not be Granted
 - Initial plan from Microsoft was to have us access actual app code and work with it directly as the main focus for this project. This fell through and makes our early planning obsolete since features would require listeners only present in source code.
 - Extensive discussion with client to instead shift focus to sentiment analyses and automated delivery of this data, keeping in-app review prompt through prototypes that developers can then reference for actual implementation



Questions?

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