

# First Tee Pittsburgh

## Executive Summary

### Community Partner

Paul Coultas

### Student Consulting Team

Benjamin Chen

Will Squibb

Yuvanshu Agarwal

## Background

First Tee - Pittsburgh is a chapter of a national initiative that promotes character development and life skills in youth through golf. Active since 1997, it is among the largest of 150 chapters, providing access to golf and its inherent values to Pittsburgh's diverse youth. Supported by a dedicated team and notable sponsors, FTP not only fosters skills on the green but also enriches young lives with enduring life lessons.

## Project Description

### Project Opportunity

Unpredictable weather in Pittsburgh often disrupts outdoor classes at First Tee - Pittsburgh, creating a need for efficient class cancellation notifications. The challenge has been to find a reliable way to inform students and parents quickly to prevent unnecessary trips to the golf course. While past solutions lacked sustainability, mainly due to issues like API key deletion and unvalidated Salesforce data, our team aims to enhance communication through a system that is easily maintained, rigorously tested, and reliable. With most of the necessary infrastructure already in place, our focus is on ensuring functionality, thorough testing, and incorporating all required features.

### Project Vision

Our vision is to craft a streamlined communication system for coaches and parents, ensuring vital updates about class schedules are effectively shared. This system is designed with a straightforward user interface for coaches to quickly send notifications, while enabling parents to confirm receipt via email or text. For IT personnel, the system's simplicity ensures ease of maintenance. By maintaining the frontend's simplicity and integrating robust messaging APIs like Twilio and Mailersend, our solution is focused on reliability and testability to enhance First Tee Pittsburgh's services.

### Project Outcomes

**Enhanced User Interface:** Preserved the ReactJS frontend framework from the previous iteration for

continuity, while integrating new real-time status indicators. These indicators allow coaches to instantly see whether messages are delivered, pending, or undelivered.

<b>Automated Message Tracking:</b>	Leveraged Knock for automatic tracking, categorizing each message by delivery status and method, using Twilio for SMS and Mailersend for email communications.
<b>Simplified Notification Process:</b>	Streamlined the messaging process to a few quick steps within the coach's dashboard, with an added legend for understanding the status icons.
<b>Mobile Optimization:</b>	Ensured the application is mobile-friendly, facilitating on-the-go use for coaches, complete with confirmation pages for user actions.
<b>Rigorous Testing and Validation:</b>	Conducted thorough testing with coaches to fine-tune the application, addressing early bugs, and confirming the system's operational effectiveness.
<b>Comprehensive Documentation:</b>	Created in-depth documentation for each aspect of the project, from code to deployment, securing the system's long-term sustainability and ease of future troubleshooting.

## Project Deliverables

The First Tee Pittsburgh Notification System's key deliverables include a comprehensive Github repository containing the full source code, accessible for ongoing development. Detailed user and developer guides are provided, facilitating ease of use for coaches and aiding future development work. Account details for Heroku, Twilio, and Mailersend are meticulously documented to ensure smooth operations and transitions. The solution's framework is mapped out in a solution diagram, capturing the interactions between ReactJS, Knock, and Salesforce. Records of meeting notes underscore project evolution, while initial proposals reveal the project's scope. A rigorous security protocol underscores a commitment to system integrity, supplemented by capacity planning for future scalability. Collectively, these deliverables are crafted to enhance communication within First Tee Pittsburgh and ensure long-term sustainability of the system.

## Recommendations

To ensure the First Tee Pittsburgh notification system remains effective, it is recommended to transition deployment to AWS for enhanced scalability and reliability, supported by clear guidance and resources. Continuous exposure of coaches to the system is advised to maximize its utility, particularly during time-sensitive situations like class cancellations. Exploring the system's adoption at a national level could further enhance security and robustness through First Tee Support's involvement. Lastly, if technical challenges arise, seeking expert assistance from local tech support is suggested to maintain the system's operational integrity.

## Student Consulting Team

**Benjamin Chen** is a junior studying Information Systems at Carnegie Mellon University, looking to pursue a career in technical consulting. Ben's role in the project was in a flex position, wearing multiple hats as the client relationship manager, Salesforce database specialist, and full stack developer.

**Will Squibb** is a junior studying Information Systems at Carnegie Mellon University looking to pursue a career in software engineering. Will primarily worked as the project manager and technical lead/developer.

**Yuvanshu Agarwal** is a junior studying Information Systems at Carnegie Mellon University looking to pursue a career in software engineering. Yuvanshu worked mainly as the project's documentation head and security specialist.