Kodiak Island Borough School District (KIBSD)

Executive Summary

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Background

Kodiak Island Borough School District (KIBSD) is a public school district that operates within the Gulf of Alaska. On the main city on the island of Kodiak, the district supports and runs four elementary schools, one middle school, one high school, and one homeschool education program. Their expressed priorities as a district are to: *"Cultivate Safety and Well Being, Increase Student Success, and Support Reasonable & Reflective Learners."* Collectively, the district serves around 2,800 students in grades K-12.

Project Description

Project Opportunity

KIBSD currently uses Microsoft Forms to allow parents to sign their children up for after school activities, which automatically populates each individual response into an Excel sheet. This not only puts a lot of manual work on the Kodiak team to confirm these enrollments and place the students into their respective activity or "session", but also doesn't allow the team to get meaningful insights into enrollment data. KIBSD is looking for ways to build a more specific platform for their afterschool registrations that can automate the manual work they are doing, as well as giving administrators analytics and the flexibility they need in managing these sessions.

Project Vision

Our team aimed to build a web-based application that allows parents to enroll their children in after-school programs and allowed district administrators to monitor and analyze enrollments, as well as add new programs for parents to sign their children up for. Our web application could then potentially be used for other districts within Kodiak, to help facilitate other after school programs as well.

Project Outcomes

Our technology outcomes include a custom sign-up form to register students for sessions that automatically sends an enrollment confirmation email to the parent. Our team also built an administrator portal with a dashboard displaying live data and analytics, and includes tables of confirmed/unconfirmed enrollments as well as the ability to create and modify sessions. We deployed a React.js frontend with a Python backend using the Django framework. Our data is stored in a PostgreSQL database, with the middleware controlled by Django and the tables initialized by Django's ORM. At the moment we have tracking generated tokens for email validity, parent and child information, and administrator account info. As for process outcomes, we found success and value in our documentation of meeting notes and ideation discussions, which allowed us to look back on past references and shape our decision-making. Apart from technology or process outcomes, we were able to foster a great relationship with our client in our meetings, establishing trust and transparency, which allowed us to freely share opinions and feedback throughout the duration of the project.

Project Deliverables

Our deliverables consist of the repository and deployed systems mentioned above. Additionally, we've thoroughly commented our code and created a README(.md) for a future student team or group of contractors to pick up where we've left off.

Recommendations

We recommend having adding waitlist functionality for the parents and administrators, and refactoring the API names a bit to follow more coherent conventions. We also weren't able to extensively user test our system, so having KIBSD send out surveys on what parents would like to see with the form would help future developers pinpoint possible improvements.

Student Consulting Team

Roman Kaufman was a developer on the team. He is a graduating Information Systems Senior with a minor in Computer Science. He will be starting his career as a software engineer this Fall, joining the Microsoft Azure team in Redmond, Washington.

Matthew Liu was a developer on the team. He is a third-year student majoring in Information Systems with an additional major in Statistics and a minor in Human-Computer Interaction. He will be interning at IQVIA in Boston, Massachusetts this summer and is looking towards a career in data science.

Jeremy Xue was a developer on the team. He is a third-year student majoring in Information Systems with a minor in Computer Science. He will be interning as a Software Engineering Intern at Redfin this summer in San Francisco, California and is looking toward a career in software engineering.