

ALPB SLUGGER PLATFORM

The Atlantic League of Professional Baseball's very own analytics hub
powered by **Trackman** and **Pointstreak**.
Available at alpb-analytics.com

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JOHNS HOPKINS
WHITING SCHOOL
of ENGINEERING

sports-analytics.cs.jhu.edu

Problem Statement

In 2024, the Atlantic League began installing **Trackman radars** in its stadiums, generating over 200 data points per pitch. Despite this wealth of information, the data remains largely **inaccessible** to analysts, who must coordinate directly with the league to obtain it. Even then, the data is **messy and unorganized**. Teams across the league face a similar challenge: there's no standardized way to access statistical tools created by developers. This lack of infrastructure creates a major barrier to leveraging potentially game-changing insights.

Our Solution

SLUGGER is the first **centralized data analytics platform** for the Atlantic League of Professional Baseball. The platform supports the creation, discovery, and use of analytical "widgets", built by a growing community of developers. These widgets leverage our processed Trackman data to uncover and display meaningful insights, **enhancing decision-making** across the league. While Trackman data sparked the initial vision for the platform, we're actively expanding to include additional sources like PointStreak to provide developers with the **richest possible data** for widget development.

Tech Stack

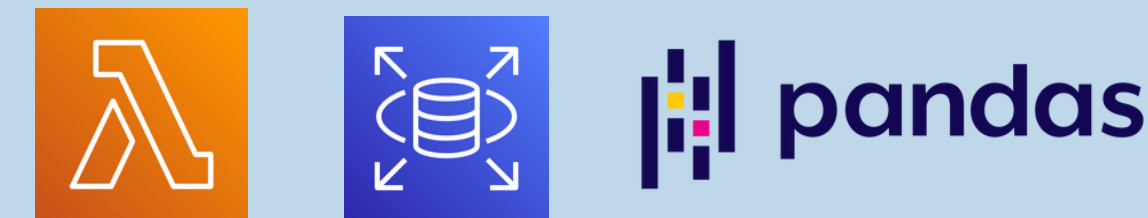
Frontend



Backend



ETL Pipeline



Features & Implementation

1 At the core of our platform is a **Trackman-powered API**, helping turn data into wins.

We leveraged **AWS Lambda** serverless functions to design our API, allowing our **Widget Developers** to access up-to-date pitch-by-pitch **Trackman** data.

We developed a **RESTful API** using **AWS API Gateway** with **5 endpoints**:

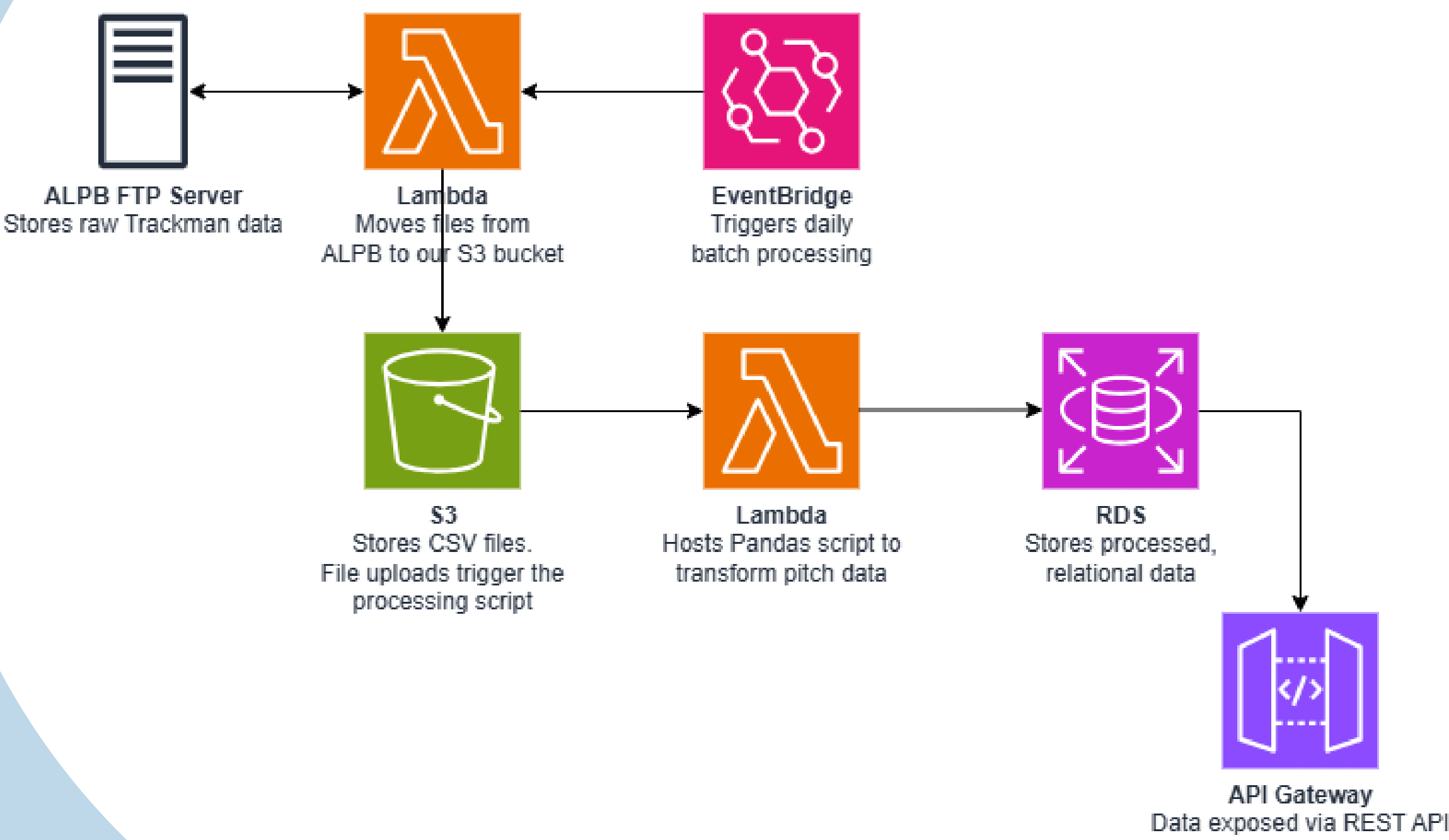
Teams → Lists all teams with details like names, abbreviations, and divisions.

Ballparks → Returns ballpark information, with dimensions coming soon.

Players → Includes player attributes such as handedness, positions, and team affiliation.

Games → Provides game metadata including final scores, dates, and home/away teams.

Pitches → Returns detailed pitch data including pitcher, batter, pitch result, and velocity.

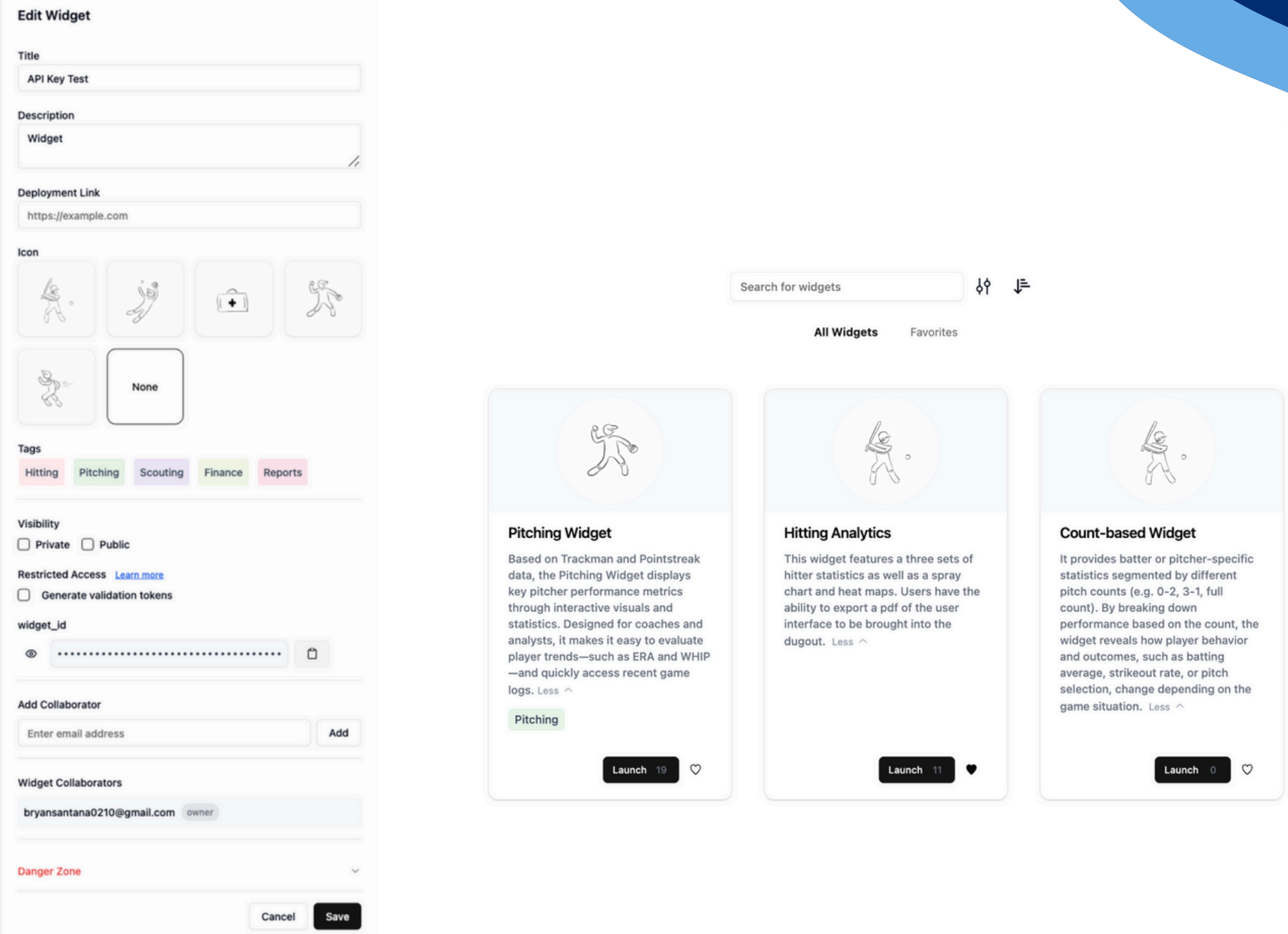


2 Data Pipelines

Our ETL pipeline processes **60,000+** points of pitch data per game. Leveraging batch processing and Pandas transformation scripts, facilitated by AWS cloud tools, we're able to provide clean, feature-rich, and up-to-date data to analysts.

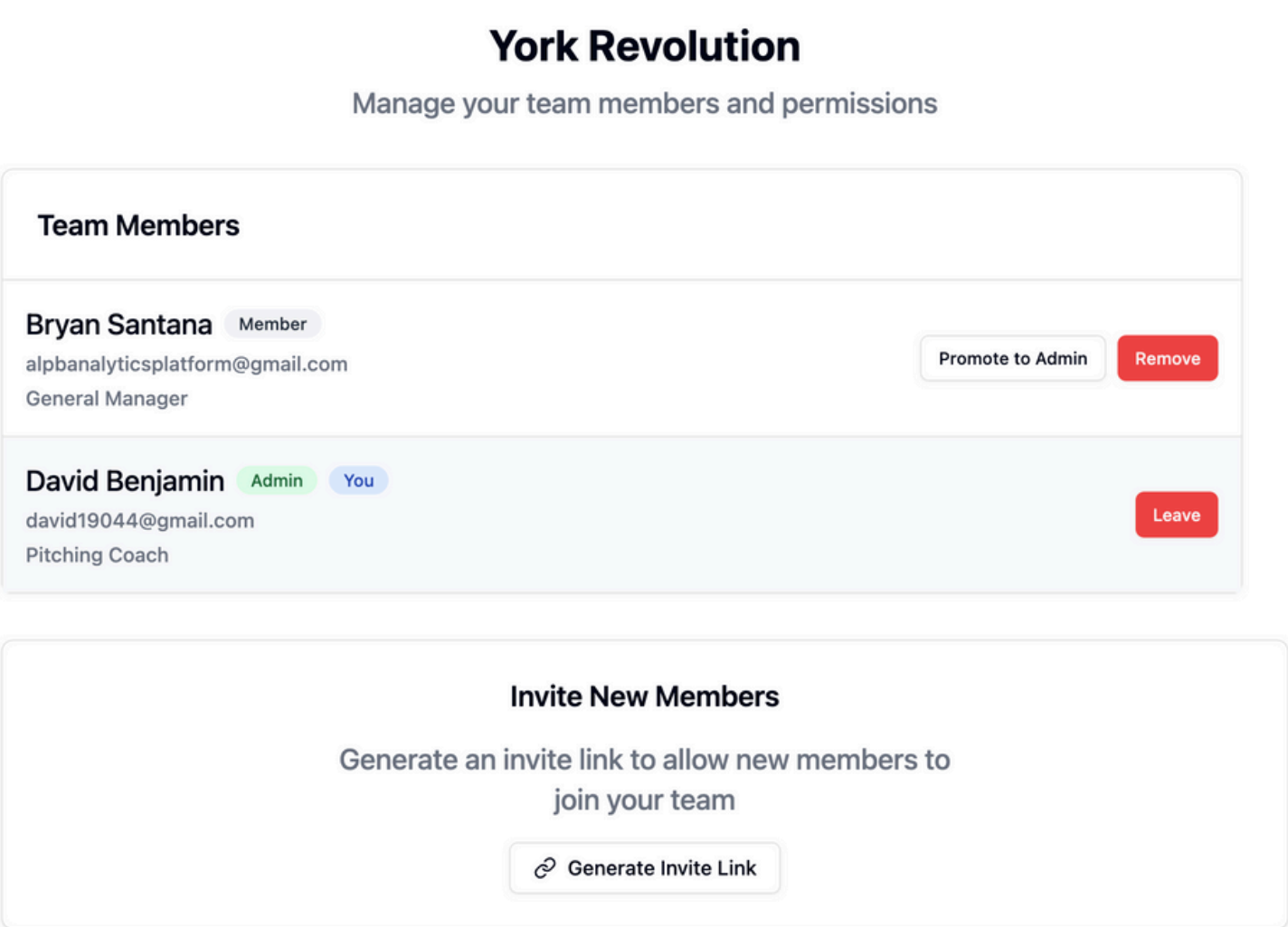
3 Creating a Widget

- Sign Up** – Widget developers register on our platform to gain access.
- Get Approved** – Once approved, they receive a unique API key to access our up-to-date Trackman data.
- Build a Widget** – Developers use the API to create a standalone application powered by our data.
- Deploy and Share** – They provide a deployment link, which is then made available to ALPB personnel via our widget dashboard.



4 Team Management & Widget Use

- Atlantic League members can register and manage their team members. Adding team members is a quick process with an invite link.
- From our widget dashboard, ALPB personnel can view, favorite, filter, and launch widgets that assist in league-wide game-day decisions.



Launch Day

We are proud to welcome Atlantic League coaches, players, GMs, and more onto our platform for the 2025 Atlantic League season.

At launch, SLUGGER will include 4 core widgets:

- Lineup Optimization
- Pitching Widget
- Count-Based Widget
- General Statistic Widget

With more to come from a growing community of developers!