Project Proposal

**Project Title:** MLB Stats API Page

**Project Owner:** Eli Langille

**Project Description:** A Dockerized webpage to make queries to the Official MLB API via NodeJS (<https://github.com/asbeane/mlb-stats-api> ). Users will be able to query team and player info along with various statistics such as win/loss records, hitting, pitching, and fielding stats, league and team records, and stat splits.

**Technologies Required:** Docker, JavaScript, NodeJS, HTML, CSS, MLB-Stats-API

**Project Timeline: ~**4 weeks, 2-5 hours per week.

**Project Milestones:**

* Set Up Development Environment: Create Docker container and set up NodeJS structure
* Basic Server-Side Framework: Create basic Express server with core query routes (players and teams) to API
* Design UI: Create webpage interface for navigation and querying
* Integrate UI with API: Send queries to backend and parse responses
* Expand Query Capabilities: Add additional statistics, splits, and record querying
* Finalize Application: Test and debug before submission/deployment

**Project Challenges and Solutions:**

* API Rate Limits: Implement MongoDB for data caching if necessary
* Parsing Complex JSON Data: Establish logic for parsing nested and complex JSON data, complete regular testing
* Docker Configuration Issues: Regular testing and health checks
* Handling User Input for Complex Queries: Implement express-validator, an auto-suggester, or dropdowns to reduce input errors.
* API User Auth and Key Security: Find a way to store any API Keys securely or prompt the user for their own