Statement of Work (SOW)

Project Title: FIFA World Cup Analysis
Date: 07-02-2025

1. Introduction

This Statement of Work (SOW) outlines the objectives, scope, deliverables, and responsibilities for the **"FIFA World Cup Analysis Mobile Application"** to be executed. The project aims to leverage publicly available APIs to fetch FIFA World Cup data and provide visual analytics to users, enhancing their experience by offering insights, statistics, and interactive data visualisation.

2. Scope of Work

Project Description

The project involves developing a mobile application that fetches real-time and historical FIFA World Cup data using APIs and visualises key statistics through interactive charts and graphs. The app will provide match analysis, team comparisons, and player performance insights.

Objectives

- Develop a mobile app for FIFA World Cup analysis.
- Integrate APIs to fetch real-time and historical FIFA data.
- Implement visual analytics for better data representation.
- Ensure a user-friendly and engaging UI/UX.

Key Activities

- **API Integration:** Fetch data from reliable sources.
- **Data Processing:** Clean and structure API responses.
- **Visualisation:** Display statistics using charts and graphs.
- **Frontend Development:** Build a mobile-friendly UI.
- **Backend Development:** Handle API calls and manage data.

- **Testing & Deployment:** Ensure app functionality and performance.

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3. Deliverables

List the tangible and intangible outputs of the project.

- **Week 1- Week 2: Initial meeting**
- **Week 2 - 5: API Integration Module(data collection and planning)**
- **Week 5 - 8: Software requirements specifications**
- **Week 8 - 12: Mobile Application (Frontend & UI/UX)**
- **Week 12 -14: Testing and Updates**
- **Week 14: Deployment**

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4. Timeline and Milestones

Provide a high-level timeline with key milestones.

Milestone	Description	Due Date
Project Kickoff	Initial project meeting	Week 1
Phase 1 Completion	API integration & backend setup	Week 8
Phase 2 Completion	UI/UX design & data visualization	Week 12
Final Delivery	Submission of all deliverables	Week 14

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5. Roles and Responsibilities

- **Backend Developer:** Suchit (SE22UCSE145) and Varun (SE22UCSE285) Develops and maintains the backend services, handles API integration, and processes data.

- **Frontend Developer:** Saketh(SE22UCSE238) and Saranya(SE22UCSE160)
  Designs and develops the mobile application, ensuring smooth user interaction.

- **Data Analyst:** Rishi(SE22UCSE220) and Kaushik(SE22UCSE041)
  Transforms raw FIFA data into meaningful insights using interactive visualisations.

- **Tester:** Meghana(SE22UCSE166) and Rithvik (SE22UCSE224)
  Ensures that the mobile application is bug-free, functional, and user-friendly before its final release.

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6. Technology Stack

1.Programming Language:
Python

2. Frontend (Mobile App):
Framework: React Native
State Management: Redux
Navigation: React Navigation

3. Backend:
Language: Python
Database: PostgreSQL
Caching: Redis
Realtime Data: FastAPI Websockets, FIFA World Cup API, Opta Sports API

4. Devops & Deployment:
Docker Kubernetes
CI/CD: Github Actions
Mobile App Deployment: Google Play Store(android), Apple Store(Apple)
Backend Hosting: AWS Cloud

7. Assumptions and Constraints

Assumptions:
- Availability of FIFA World Cup API and Opta Sports API with required data endpoints.
- Public APIs provide reliable and updated FIFA data.Public APIs provide reliable and updated FIFA data.

Constraints:
- API rate limits and data usage restrictions
- Scalability limitations based on the chosen cloud infrastructure (e.g., AWS EC2 instance types)