

# Project Proposal

Samed Kahyaoglu & Taha Yasin Arslan

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## Project Details

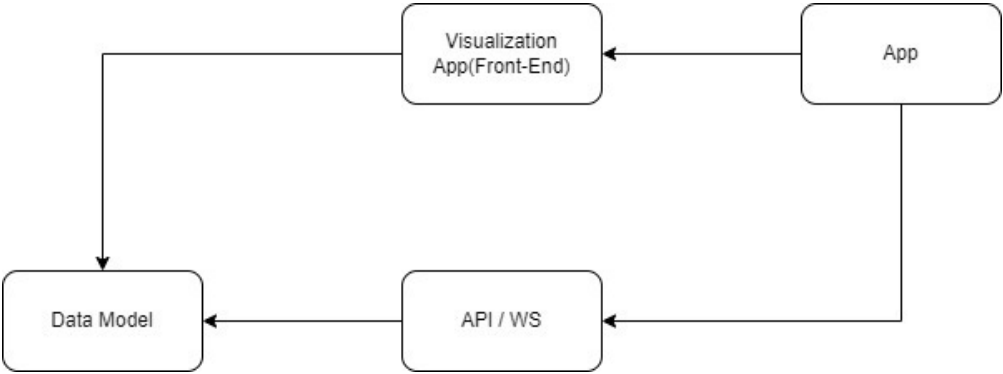
<b>Title</b>	Real-time Field Goal Visualizer for Basketball
<b>Summary</b>	Basketball coaches use real-time stats of the game for better decisions. The responsible staff collects the data. But the data itself is hard to read and interpret while watching players on the field. Data visualization is crucial to reduce the complexity of data and to assist coaches for better judgments. The project aims to visualize goal attempts and goals made in the field. The app provides simple and real-time data delivery from referee staff to coaches.
<b>Problem</b>	Basketball coaches need to be informed by stats during the game. The information should be real-time and easy to interpret.
<b>Motivation</b>	The project aims to simplify the real-time field goal data by using field representation for basketball teams.
<b>Solution</b>	Spotting every failed or successful goal attempt in a 2D map of the basketball court.
<b>Keywords</b>	Basketball, sport statics, visualization
<b>Duration</b>	3 Weeks with 2 People

# Workforce Plan

Task*	Outcome	Asignees	W1	W2	W3
Design The Application	Data Model, Guide Materials	<b>Backend Developer (Samed)</b> Frontend Developer (Taha)	X		
Backend Implementation	API / WS	Backend Developer (Samed)		X	
Front-end Implementation	Visualisation App	Frontend Developer (Taha)		X	
Integration	App	<b>Frontend Developer (Taha)</b> Backend Developer (Samed)			X

## Project Plan

\*Each task is a work package



Dependency Graph

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## Work Packages

<b>Package Name</b>	Design The Application
<b>Objective</b>	Developers agree on details about what to do and how. They clarify their expectations about outputs.
<b>Activities</b>	<ul style="list-style-type: none"><li>• Determine the scope of the project</li><li>• Decide on tech stack</li><li>• Decide the application architecture</li></ul>
<b>Workforce Cost</b>	2 Developers / 1 Week
<b>Output</b>	Data Model & Guide Materials
<b>Assignees</b>	<ul style="list-style-type: none"><li>• <u>Backend Developer (Samed)</u></li><li>• Frontend Developer (Taha)</li></ul>
<b>Dependencies</b>	-

<b>Package Name</b>	Backend Implementation
<b>Objective</b>	Create a service for data delivery.
<b>Activities</b>	<ul style="list-style-type: none"><li>• Implement the backend app</li><li>• Tests</li></ul>
<b>Workforce Cost</b>	1 Developer / 1 Week
<b>Output</b>	API or Web Socket
<b>Assignees</b>	<ul style="list-style-type: none"><li>• Backend Developer (Samed)</li></ul>
<b>Dependencies</b>	<ul style="list-style-type: none"><li>• Data Model &amp; Guide Materials</li></ul>

<b>Package Name</b>	Front-End Implementation
<b>Objective</b>	Determine and implement visual characteristics of the project.
<b>Activities</b>	<ul style="list-style-type: none"> <li>• Visual design</li> <li>• Implementation</li> <li>• Web Interface</li> </ul>
<b>Workforce Cost</b>	1 Developer / 1 Week
<b>Output</b>	Frontend Visualization App
<b>Asignees</b>	<ul style="list-style-type: none"> <li>• Frontend Developer (Taha)</li> </ul>
<b>Dependencies</b>	<ul style="list-style-type: none"> <li>• Data Model &amp; Guide Materails</li> </ul>

<b>Package Name</b>	Integration
<b>Objective</b>	Integrate of Back-End and Front-End sides of the web application
<b>Activities</b>	<ul style="list-style-type: none"> <li>• Database Integration</li> <li>• Interface integration</li> <li>• Tests</li> </ul>
<b>Workforce Cost</b>	2 Developer / 1 Week
<b>Output</b>	Web Application
<b>Asignees</b>	<ul style="list-style-type: none"> <li>• <u>Frontend Developer (Taha)</u></li> <li>• Backend Developer (Samed)</li> </ul>
<b>Dependencies</b>	<ul style="list-style-type: none"> <li>• Frontend Visualisation App</li> <li>• API / WS</li> </ul>

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## Deliverable Schedule

Date	Deliverable	Person In Charge
15 December 2021	Data Model	Samed Kahyaoglu
22 December 2021	Backend Implementation	Samed Kahyaoglu
22 December 2021	Frontend Implementation	Taha Yasin Arslan
29 December 2021	App	Taha Yasin Arslan

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## Feasibility

Basketball is one of the world's largest sports markets with an estimated value is around 100 billion dollars. Many basketball teams seek improvements in team performance. We provide a product for professional basketball teams. The product helps the coach during the game by delivering data in an easy, visualized way. The product may achieve remarkable score differences to summon rich basketball clubs' attention. Although the scope of the project is limited to activities that change the score, basketball games have various stats beyond goal attempts. This 3-week project will be a test product for measuring the market's attention. In case of positive results, the product and pricing are going to be finalized with basketball professionals' assistance.