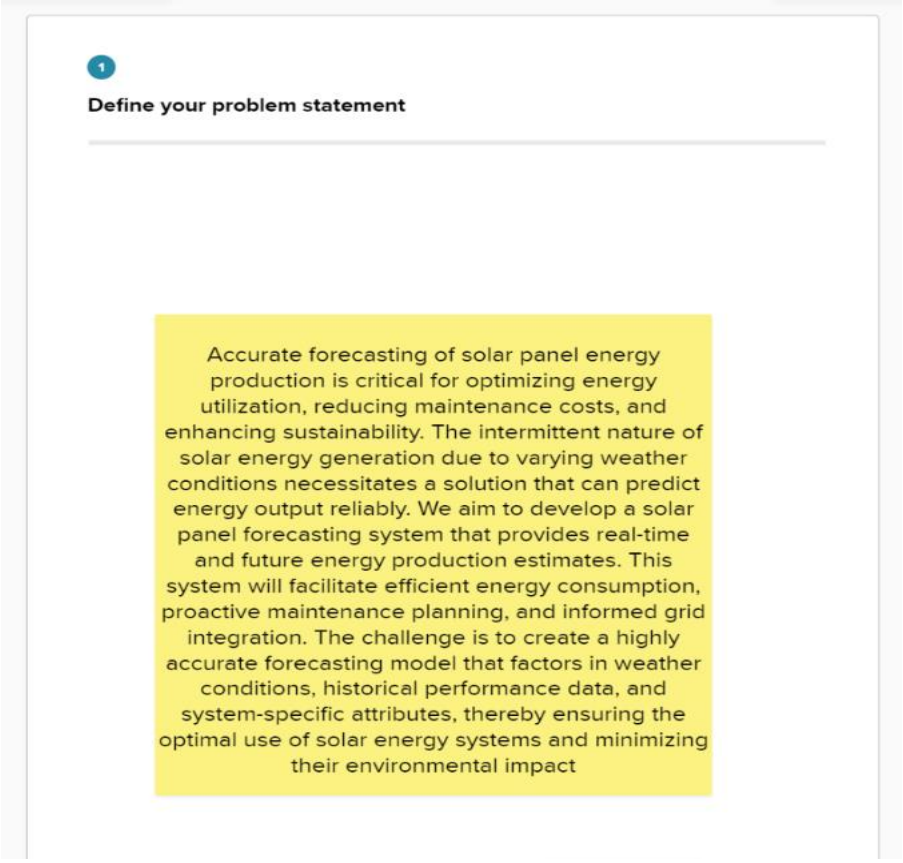
Ideation Phase
Brainstorm & Idea Prioritization Template

Date	19 September 2023
Team ID	9C05B58063F2C7CAA384F87D2AA8CF21
Project Name	Solar panel forecasting
Maximum Marks	4 Marks

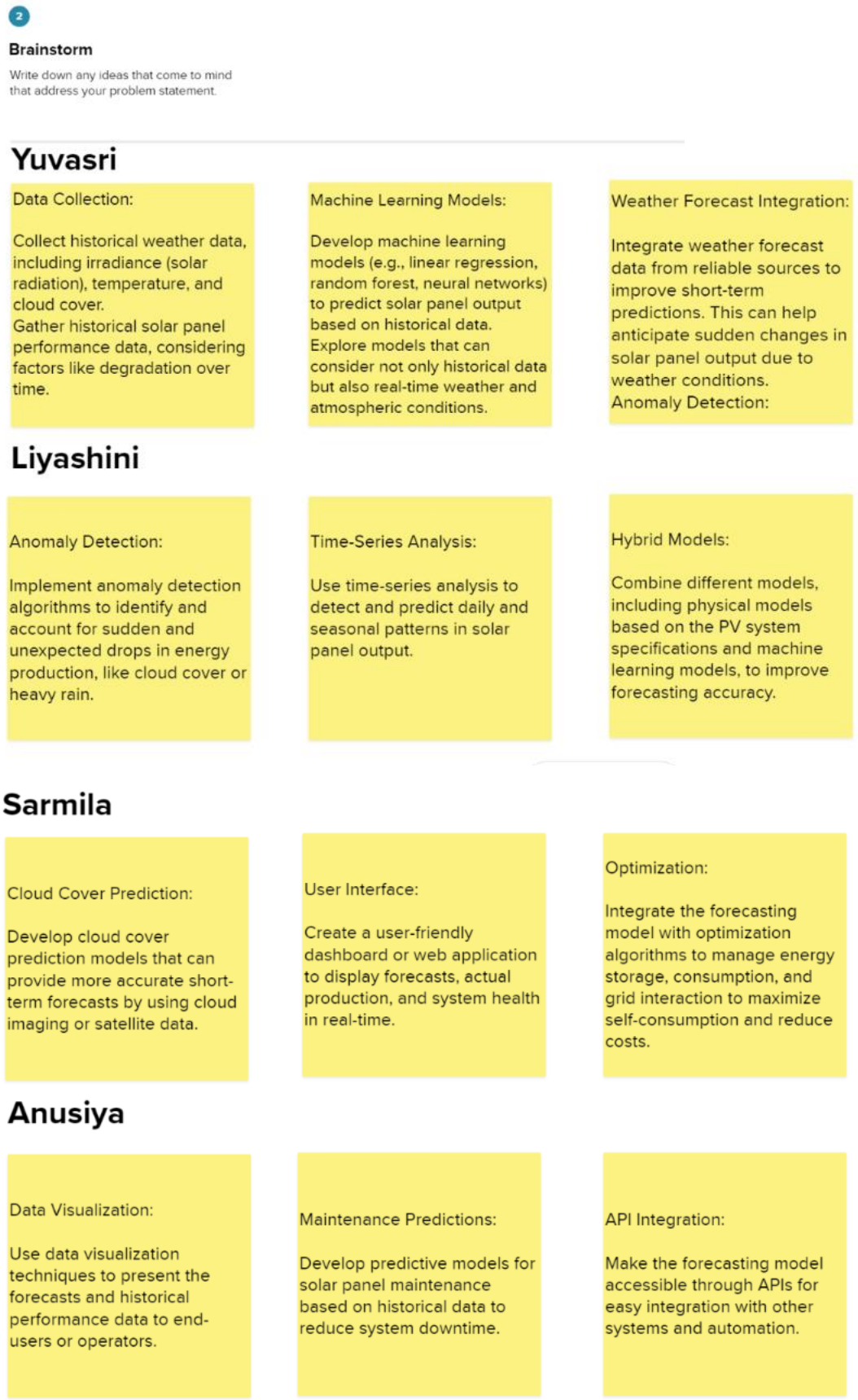
Brainstorm & Idea Prioritization :

In pursuit of an impactful solar panel forecasting project, we propose a range of ideas. The first concept involves the creation of a user-friendly mobile application that offers real-time solar panel performance forecasts for homeowners, facilitating optimized energy consumption and storage. Additionally, we suggest developing a community-based solar energy sharing platform, allowing neighbors to share excess energy, with forecasts ensuring grid stability and fair sharing. For the agricultural sector, we can build a tool that predicts solar energy availability, enabling farmers to optimize irrigation, livestock management, and crop planting. Furthermore, a disaster preparedness forecasting model can predict extreme weather event impacts on solar energy production, aiding in emergency planning and relief efforts. Implementing a solar energy trading marketplace where owners can buy and sell excess energy, guided by forecasts, is another valuable option

Step-1 Select the Problem Statement



Step-2: Brainstorm, Idea Listing and Grouping



3

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

20 minutes

Solar Panel Maintenance Forecasting:
Create a predictive model that forecasts when solar panels may require maintenance or cleaning based on historical performance data and local environmental conditions. This can help reduce downtime and ensure optimal

Solar Energy Pricing Forecast: Create a tool that forecasts electricity prices and aligns solar energy production with peak pricing periods, allowing users to sell excess energy at higher rates or optimize consumption during low-cost periods.

Energy Storage Optimization: Develop a forecasting model that predicts energy production and consumption, allowing for optimized control of energy storage systems (e.g., batteries) to maximize self-consumption and grid interactions.

Demand Response Forecasting: Predict energy demand fluctuations and provide forecasts to grid operators and consumers, enabling them to adjust their energy consumption patterns in response to varying solar energy production.

Environmental Impact Assessment: Create a tool that forecasts the environmental impact of solar panel systems, considering factors such as reduced carbon emissions and energy savings over time. This information can be valuable for sustainability reporting and decision-making.

Solar Energy Investment ROI: Develop a forecasting tool that estimates the return on investment (ROI) for potential solar panel installations, considering location-specific data, electricity prices, and government incentives.

Step-3: Idea Prioritization