**Project Planning Phase**

**Project Planning Template (Product Backlog, Sprint Planning, Stories, Story points)**

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| --- | --- |
| Date | 29 September 2023 |
| Team ID | 62068211D555C508F8E4542C3732872A |
| Project Name | Solar panel Forecasting |
| Maximum Marks | 8 Marks |

**Product Backlog, Sprint Schedule, and Estimation (4 Marks)**

Use the below template to create product backlog and sprint schedule

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | **Goal** | **Tasks** | | | | | **Estimation** |
|  | **Sprint** |  |
| **Sprin 1** | | **t** | Develop the core forecasting algorithm |  Design and implement the machine learning model for solar panel power generation forecasting.2 weeks | | | | | 2 weeks |
|  | |  |  |  Train the machine learning model on historical data from various sources. | | | | | 2 weeks |
|  | |  |  |  Evaluate the performance of the trained model. | | | | | 1 weeks |
| **Sprin 2** | | **t** | Implement real-time data acquisition and forecasting |  Establish connections with weather data providers | | | | | 1 week |
|  | |  |  |  Implement data ingestion pipelines for real-time data acquisition. | | | | | 2 weeks |
| **Sprin 3** | | **t** | Develop user interface and visualization dashboards | Design and implement user-friendly interfaces for data visualization and analysis. | | | | | 2 weeks |
|  | |  |  | Create interactive dashboards to present forecasting results. | | | | | 1weeks |
|  | |  |  | Integrate historical data visualization with real-time forecasts. | | | | | 1 weeks |
| **Sprin 4** | | **t** | Integrate with existing solar panel monitoring systems | Develop APIs for data exchange with existing solar panel monitoring systems. | | | | | 1 weeks |
|  | |  |  | Test the integration with different solar panel monitoring systems. | | | | | **2 weeks** |
|  | |  |  |  | | | | | 1 weeks |
|  | Implement integration protocols to enable seamless data transfer. | | |  |
| **Sprin 5** | | **t** | Deploy and release the forecasting system | Conduct user testing to gather feedback and identify usability issues. | | | | | 1 week |
|  | | |  |  | | | | | 2 weeks |
|  | Deploy the forecasting system to production environ | ment. |  | |
|  | | |  | Provide training and documentation for users. | |  | | | 1 weeks |
|  | | |  |  | |  | | | Ongoing |
|  | Monitor system performance and address any issues. |

**Total** Estimated **Time: 15-20 weeks**

**Project Tracker, Velocity & Burndown Chart: (4 Marks)**

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| --- | --- | --- | --- | --- | --- | --- |
| **Sprint** | **Total Story Points** | **Duration** | **Sprint Start Date** | **Sprint End Date (Planned)** | **Story Points**  **Completed (as on**  **Planned End Date)** | **Sprint Release Date (Actual)** |
| Sprint-1 | 20 | 6 Days | 24 Oct 2023 | 29 Oct 2023 | 20 | 29 September 2023 |
| Sprint-2 | 20 | 6 Days | 31 Oct 2023 | 05 Nov 2023 |  |  |
| Sprint-3 | 20 | 6 Days | 07 Nov 2023 | 12 Nov 2023 |  |  |
| Sprint-4 | 20 | 6 Days | 14 Nov 2023 | 19 Nov 2023 |  |  |
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**Velocity:**



Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let’s calculate the team’s average velocity (AV) per iteration unit (story points per day)

**Burndown Chart:**

A burn down chart is a graphical representation of work left to do versus time. It is often used in agile [software development](https://www.visual-paradigm.com/scrum/what-is-agile-software-development/) methodologies such as [Scrum.](https://www.visual-paradigm.com/scrum/scrum-in-3-minutes/) However, burn down charts can be applied to any project containing measurable progress over time.