**Key Deliverables and Sprints For Masters Students**

**September 2024 to September 2025**

**General Goals:**

**Core focus**

* Functionality: The primary goal is to demonstrate the feasibility of the system and the impact of the key features, especially focusing on the user experience, system integration, and personalization features.
* User-Centered Design: The website and app need to be designed based on the personas, red routes, and KPIs previously prepared.
* Technology: Both the website and the app should be functional with simplified features, enough to show a working system, but not overly complex or feature-heavy.

By the end of the six months, the website and app should have:

* A functional user registration and authentication system.
* Personalized task recommendations based on the P.A.C.E. System.
* A reward system to incentivize user engagement.
* A blacklist system for poor performers.
* Basic analytics for tracking progress and behaviour.
* A final, polished product ready for presentation, demo, and user feedback.

**Final thesis to be submitted at the end of the six months.**

**Key Milestones**

|  |  |
| --- | --- |
| **Month 1** | * Foundational architecture for both the website and app fully characterized. |
| **Month 2-3** | * Personalized task recommendations and reward systems fully implemented. |
| **Month 4-5** | * Reinforcement learning and finalize analytics and user engagement features fully incorporated into app and website. |
| **Month 5** | * First draft of thesis |
| **Month 6** | * A final demo and polished product for delivery. * Final thesis |

**Deliverables Over next 6 Months**

**1. April (Sprint 1): System Design and Foundation Setup**

|  |  |
| --- | --- |
| **Website & App Setup** | * Create and configure development environments (e.g., version control, databases, backend structure) with the necessary queries setup to obtain KPI information. * Implement the basic navigation flow for the website and the app. |
| **Database Integration** | * + Integrate the **master database schema** for user data.   + Build basic **client profile storage**, where user information can be securely stored. Since self-hosting will be used, demonstrate where data will be stored, what client data will be stored (personal information, account information, transaction history, etc) and how this complies with the basic General Data Protection Regulation (GDPR). |
| **User Interface (UI) & Experience (UX)** | * + Design and implement the homepage/dashboard interface based on user personas.   + Develop core navigation for users to access activities, and rewards. |
| **Initial Backlog Items** | * Define specific tasks for each sprint (e.g., user registration, client activity dashboard, rewards system, etc.). |

**2. May (Sprint 2): User Registration & Contract Setup**

|  |  |
| --- | --- |
| **User Registration & Authentication** | * Implement basic user authentication (login, sign-up, profile management). * Design the initial **system** that will present personalized activities (daily tasks) based on user data. (there should be at most 2 activities per Action. Six actions where identified: (1) Donat and Buy, (2) Volunteer and Lead, (3) Reduce, reuse and recycle, (4) Advocate and Empower, (5) Strengthen mind body and spirit and (6) Protect, land sea and animals) |
| **Personalized Tasks** | * Define reward system logic offer simple sustainability-related activities points for users. * Ensure that rewards are reflected in user KPIs and show how these points are captured in the front end of both app and website. |
| **App & Website Integration** | * Ensure the app and website are synced in terms of user progress, activities, and rewards. * Test the integration between front-end and back-end for smooth data flow. |

**3. June (Sprint 3): Activity Tracking & Reward System**

|  |  |
| --- | --- |
| **Activity Tracking** | * Implement a system to track users’ completion of daily tasks. * Develop the logic to update users' **loyalty scores** based on their task completions. |
| **Reward System** | * Design the **rewards interface** that displays the user’s accumulated points. * Integrate a **basic leaderboard or progress bar** to motivate users. |
| **App & Website Sync** | * Ensure both platforms (website and app) track activity progress and reward issuance in real-time. |
| **Testing** | * Conduct functional testing of task tracking and rewards, ensuring the system is bug-free. |

**4. July (Sprint 4): Blacklist Analytics and user testing**

|  |  |
| --- | --- |
| **Blacklist Database** | * Implement a **blacklist system** that flags users with low engagement or non-compliance with their tasks. Blacklist system need not be a separate system but could be a simple system of queries to flag poor engagement. Poor engagement should be defined by the developers. * Design a simple interface to alert system administrators of flagged users. |
| **Client Analytics** | * Develop basic **analytics** for tracking user engagement, completion rates, and loyalty. * Implement a dashboard for **admin users** to view user behaviour trends and system performance. |
| **Testing & Feedback** | * Conduct user testing to gather feedback on registration and task allocation process. A maximum of 10 users should be used as a test group. * Record user feedback and demonstrate how feedback is integrated to improve app and website. |

**5. August (Sprint 5): AI Integration & System Optimization**

|  |  |
| --- | --- |
| **AI System** | * Develop a simplified version of the **AI system** that recommends personalized tasks based on user behavior, preferences, and SDGs. This should be a simple reinforcement learning module built into the system. |
| **System Optimization** | * Optimize both the app and website for speed, scalability, and user interaction. |
| **Testing** | * Conduct AI-related testing to ensure it suggests relevant tasks based on user behaviour. * Conduct stress testing to assess the scalability of the system. |
| **First Draft of Thesis** |  |

**6. September (Sprint 6): Final Adjustments, Polishing, and Demo**

|  |  |
| --- | --- |
| **Polishing the UI/UX** | * Finalize and polish the **UI/UX**, ensuring both the app and website have a cohesive, professional look. |
| **Final Functional Testing** | * Ensure that all features (registration, task completion, rewards, blacklist, analytics, AI recommendations) are working as expected. |
| **Final Demo** | * Prepare for a **final presentation/demo** showcasing the full working functionality of the system. |
| **Documentation** | * Prepare **documentation** for the app and website (how it works, the tech stack used, the functionality of the system, and the expected impact). |
| **Final Thesis** |  |