### ✅ **MUST HAVES (Critical for core functionality in Sprint 1)**

#### 🎓 Students (End Users)

1. **As a student, I want to create an account using my email and password so that I can use the application securely.**
2. **As a student, I want to log in to my account so that I can access my saved units and predictions.**
3. **As a student, I want to input my current and past units with grades and study effort so that I can receive accurate grade predictions.**
4. **As a student, I want to view predictions based on data entered so that I can understand my potential grade.**
5. **As a student, I want to edit or delete unit entries so that my data stays up to date.**
6. **As a student, I want to receive confirmation after saving/updating data so that I know it worked.**

#### 🛠️ Backend Developers

1. **As a backend developer, I want to design a secure and scalable database so that all user and unit data is stored safely.**
2. **As a backend developer, I want to implement a secure authentication system using hashed passwords so that user accounts are protected.**
3. **As a backend developer, I want to build an API that handles CRUD operations for user data so that the frontend can interact with the backend efficiently.**
4. **As a backend developer, I want to integrate the third-party AI service using clean and secure API endpoints so that the application can return predictions.**

#### 🎨 Frontend Developers

1. **As a front-end developer, I want to build a responsive layout for all screen sizes so that students can use the app on desktop and mobile devices.**
2. **As a frontend developer, I want to create a navigation menu with links to key pages (Home, Units, Predictions, Profile) so that users can move through the app easily.**
3. **As a front-end developer, I want to validate form inputs before submission so that only valid data is entered.**
4. **As a front-end developer, I want to display predictions clearly (even basic format) so that users can understand them.**

#### 📋 Project Manager

1. **As a project manager, I want to track the progress of user stories and sprint tasks so that I can ensure the timely delivery of project milestones.**
2. **As a project manager, I want to assign tasks to front-end and back-end developers based on their expertise so that the workload is balanced and efficient.**

### 🟡 **SHOULD HAVES (Important but not essential for Sprint 1 delivery)**

#### 🎓 Students

1. **As a student, I want to view a list of my current and past units so that I can verify the data being used for predictions.**
2. **As a student, I want to add planned study time for units so that the prediction reflects my future efforts.**
3. **As a student, I want to see real-time updates in my grade predictions when I modify effort or units so that I can adjust my study plan.**
4. **As a student, I want to view my predictions in a visual format (basic charts or progress bars) so that I can quickly understand my outcomes.**

#### 🛠️ Backend Developers

1. **As a backend developer, I want to log system errors and failed API calls so that I can troubleshoot issues effectively.**

#### 🎨 Frontend Developers

1. **As a front-end developer, I want to implement real-time UI updates as students change input data so that the app feels interactive and responsive.**

#### 📋 Project Manager

1. **As a project manager, I want to hold sprint planning meetings with the team so that everyone is aligned on goals and tasks.**

### 🟢 **COULD HAVES (Nice to have if there’s time in Sprint 1)**

#### 🎓 Students

1. **As a student, I want to edit my profile details (e.g., name, email) so that my account information stays accurate.**

#### 📋 Project Manager

1. **As a project manager, I want to document project decisions and changes in scope so that the team and stakeholders stay informed.**