Peakrando

1. Project context

The PeakRando project was born from a simple observation shared by many hiking enthusiasts: the outdoor experience is currently fragmented across too many different tools. A hiker often has to switch between a mapping application, another for health statistics, and various online sources to plan their outings. PeakRando aims to break these silos by offering a single platform capable of supporting the user from home preparation all the way to the summit.

The core of our solution relies on deep personalization from the moment the user joins the application. Rather than offering generic itineraries, we ask the user to set up a complete profile including their physiological data, sporting habits, and location. This approach allows us to leverage geolocation to instantly suggest relevant and accessible routes nearby, ensuring a smooth and immediate user experience.

The major innovation of PeakRando lies in the integration of a conversational artificial intelligence acting as a true personal guide. This assistant not only allows users to refine searches based on specific contexts—such as organizing a family outing, but more importantly, it becomes a pillar of physical and logistical preparation. For an ambitious goal such as climbing Mont Blanc, the application does more than just provide a GPS track, it develops a tailor-made training plan spanning several months.

This intelligent plan manages everything: from the progressive selection of training hikes to specialized equipment recommendations via our partners, including crucial reminders for refuge reservations. The strength of our system is its adaptability: if the user struggles during a training session, the AI dynamically recalculates the entire remaining program to ensure safe and consistent progress. In short, PeakRando does not just display maps; it becomes an intelligent adventure partner that adapts to the capabilities and dreams of every hiker.

2. User role

| Administrator | Responsible for global platform management, they oversee accounts, handle community reports, and certify proposed itineraries to ensure catalog reliability. |

| Standard User | Primary user role tasked with testing profile creation, GPS navigation, the recommendation AI, augmented reality features, and the submission of new routes. |

| Premium User | Tester benefiting from the full experience, including Extended AI access, offline navigation mode, and advanced hiking data analysis tools. |
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3. Feature table
[The following features will be shown during the defense]

| F1 | Admin | Member Moderation | Tools to modify, suspend, or delete user profiles in case of Terms of Service violations. | Feature Minor

| F2 | Admin | Report Management | Interface for processing community alerts with a direct response system for users. | Feature Minor

| F3 | Admin | Route Certification | Technical verification process for submitted hikes (real existence, difficulty level, visual compliance). | Feature Major

| F4 | Everyone | Community Submission | Structured form allowing users to propose new routes accompanied by photographs. | Feature Intermediate

| F5 | Everyone | Active Navigation | Launching and real-time tracking of a hiking itinerary with GPS guidance. | Feature Major

| F6 | Everyone | Onboarding & Profiling | User profile creation based on physiological data for a personalized experience. | Feature Major

| F7 | Everyone | Conversational AI Assistant | Natural language search interface to obtain tailor-made route recommendations. | Feature Intermediate

| F8 | Everyone | AR Immersion | Augmented reality features including ludic quests and contextual field information. | Feature Intermediate

| F9 | Everyone | Statistics Dashboard | Consultation of performance data and detailed history of the last completed hike. | Feature Minor

| F10 | Everyone | Goal Planner | Generation of a progressive training program to reach a specific peak or objective. | Feature Principal (Major)
| F11 | Everyone | App Navigation | Centralized menu and access system allowing intuitive navigation between all application sections. | Feature Major

| F12 | User Premium | Offline Mode | Ability to download maps and tracks for full use without a network connection. | Feature Intermediate

| F13 | User Premium | Extended AI Access | Removal of request restrictions (tokens) for generating and recalculating personalized plans. | Feature Intermediate

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4. Success Criteria

| F1 | Validation of administrative profile management | Test on a sample of 20 account modifications and deletions | Not Started |

| F2 | Moderation system effectiveness | Ability to process and respond to 20 distinct reports | Not Started |

| F3 | Certification process reliability | Argumented validation or refusal of 10 community itineraries | Not Started |

| F4 | Submission form robustness | Successful integration of 10 new hikes with media | Not Started |

| F5 | Navigation module stability | Launch and completion of 10 hiking sessions without crashes | Not Started |

| F6 | User data integrity | Success rate on 10 profile creations and 10 edits | Partially Achieved |

| F7 | AI recommendation relevance | Consistency analysis on 10 personalization requests | Partially Achieved |

| F8 | AR recognition accuracy | Detection test on 10 environmental elements (trees) | Partially Achieved |

| F9 | Statistical data accuracy | Reliability of metrics display after 10 sessions | Not Started |

| F10 | Training plan consistency | Generation of 10 long-term personalized programs | Not Started |

| F11 | Application navigation fluidity | Error-free access to the 6 main interface pages | Achieved |

| F12 | Offline mode availability | Ability to launch and follow a track without network access | Not Started |

| F13 | Assistant restriction lift | Verification of the absence of limits in Premium mode | Not Started |