**3) MediGuide – AI-Powered Medication Intelligence & Adherence Platform**

**Problem Statement:**   
Misunderstanding prescriptions is a leading cause of medication non-adherence, resulting in 125,000 preventable deaths annually. Current solutions offer passive translation but fail to address the root causes: patient anxiety, complex multi-drug regimens, and the critical "what happens next?" after taking a pill. Patients need a proactive partner, not just a dictionary.

**Objective:**   
Develop an intelligent, predictive platform that doesn't just translate prescriptions but actively guides patients through their entire treatment journey, from decoding instructions to managing side effects and ensuring adherence.

* **Predictive Personalization Engine:** The AI cross-references the prescription with (anonymized) patient age, known conditions, and past reactions to flag potential drug-drug interactions or higher-risk side effects *before* they occur.
* **Smart Medication Scheduler & Reminders:** Automatically creates a personalized intake schedule synced to the user's timezone and daily routines (e.g., "with breakfast," "after your evening walk"). Reminders escalate intelligently if a dose is missed.
* **Care Circle Integration:** Allows patients to securely share their simplified medication plan and adherence status with a family member or caregiver, turning individual management into a supported team effort.

**Requirements:**

* Advanced NLP model trained on medical literature to not only simplify language but also infer intent and potential pitfalls from prescription text.
* Integration with FHIR-based Electronic Health Record (EHR) APIs (with patient consent) for automatic prescription upload and personalization.
* A secure, encrypted backend for storing sensitive patient data and facilitating "Care Circle" invitations.
* A predictive analytics layer to model potential interactions and adherence patterns.