**Deliverable: AI-Powered Damage Reporting Assistant**

**🧠 The Big Idea**

**What is your innovative idea?**

We are developing a smart, AI-powered mobile/web application that helps users file a damage report after a car accident, just by **explaining what happened in natural language**.  
The app uses **a conversational AI assistant (LLM)** that asks clarifying questions and automatically fills out a structured damage form. It also **generates the required sketch diagram** based on the user’s explanation and can optionally extract personal data from a **photo of the user’s ID or driver’s license**.

**What problem, need, or goal does your idea address?**

Filing a car accident report is often **stressful, confusing, and time-consuming** especially just after a collision. Many people struggle with:

* Understanding what to fill in
* Drawing the situation sketch
* Avoiding errors in a legally relevant document

Our app removes friction by allowing users to just describe the situation in plain language. The AI handles the rest, making the process faster, easier, and less error-prone.

**Which (hypothetical or real) data will you need?**

* Accident report form structure (publicly available formats used in EU or by insurance companies)
* Example user explanations of car accidents (real or synthetic)
* Simple training diagram examples for sketch generation (can be rule-based or prompt-engineered)
* Public data (weather, timestamp, location metadata if used later)
* Sample images of IDs (anonymized or synthetic) for testing document reading

**Why is this interesting and innovative?**

* First-of-its-kind interface for damage reporting based on conversation, not form-filling
* Combines natural language understanding, image generation, and optional document scanning
* Gives users a sense of relief and confidence during a stressful moment
* Removes the need to draw a major barrier for many people

**Are there ethical aspects involved?**

Yes, and we take them seriously:

* **Privacy & security** of sensitive personal data (e.g., ID photos, accident details)
* **Transparency** of AI-generated content (user must always review and confirm the result)
* Avoiding bias or inaccurate interpretations of descriptions by AI
* Ensuring users remain in control and can override or correct the AI

**🚀 The Minimum Viable Product (MVP) (MoSCoW Prioritization)**

**What is the realistic MVP we can create this semester as the first step toward the big idea?**

A web or mobile prototype that lets a user:

**✅ Must Have (Core features, essential for MVP)**

* LLM-powered conversational assistant to guide the user through the report
* Start a damage report by describing the accident in text
* AI asks additional context questions to complete the picture
* Automatically generate a filled-out version of the damage report (PDF or screen form)

**⚙️ Should Have (Important but not strictly required for first release)**

* Auto-generate a sketch of the situation based on the user’s description (Gen AI)
* User can edit or add context to regenerate the sketch or update the report
* Preview and confirm generated information before export

**💡 Could Have (Nice-to-haves if time allows)**

* Option to upload a photo of an ID or driver’s license for auto-filling name/license fields
* Location/time detection from device (e.g. GPS & timestamp)

**🚫 Won’t Have (for now)**

* Integration with insurance companies or government platforms
* Advanced damage detection from car photos
* Multi-user collaboration (e.g. two drivers filling same report simultaneously)

**Which techniques and tools will you most probably use?**

* **LLM (e.g., GPT-4 or open-source or local alternatives like Meta LLAMA)** for natural language understanding and Q&A
* **Prompt-based image generation or diagrams** (e.g., with DALL·E, Stable Diffusion, or diagramming libraries) OR another technology for coordination generation.
* **OCR tools** (like Tesseract or cloud APIs) for reading ID documents
* **Front/Back-end stack:** We did not do research on this yet.

**When is our MVP done?**

The MVP is considered done when a user can:

1. Describe an accident in their own words
2. Be guided by the AI to complete the necessary details
3. Receive a full, editable accident report (including sketch)
4. Optionally use ID scan to auto-fill personal fields
5. Export the result (as PDF or structured form)