

En version



code404nul/Discord-to-dataset
code404nul/Animate_Vtuber

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AI Showcase / Large
Language Models

Projet H.A.AI

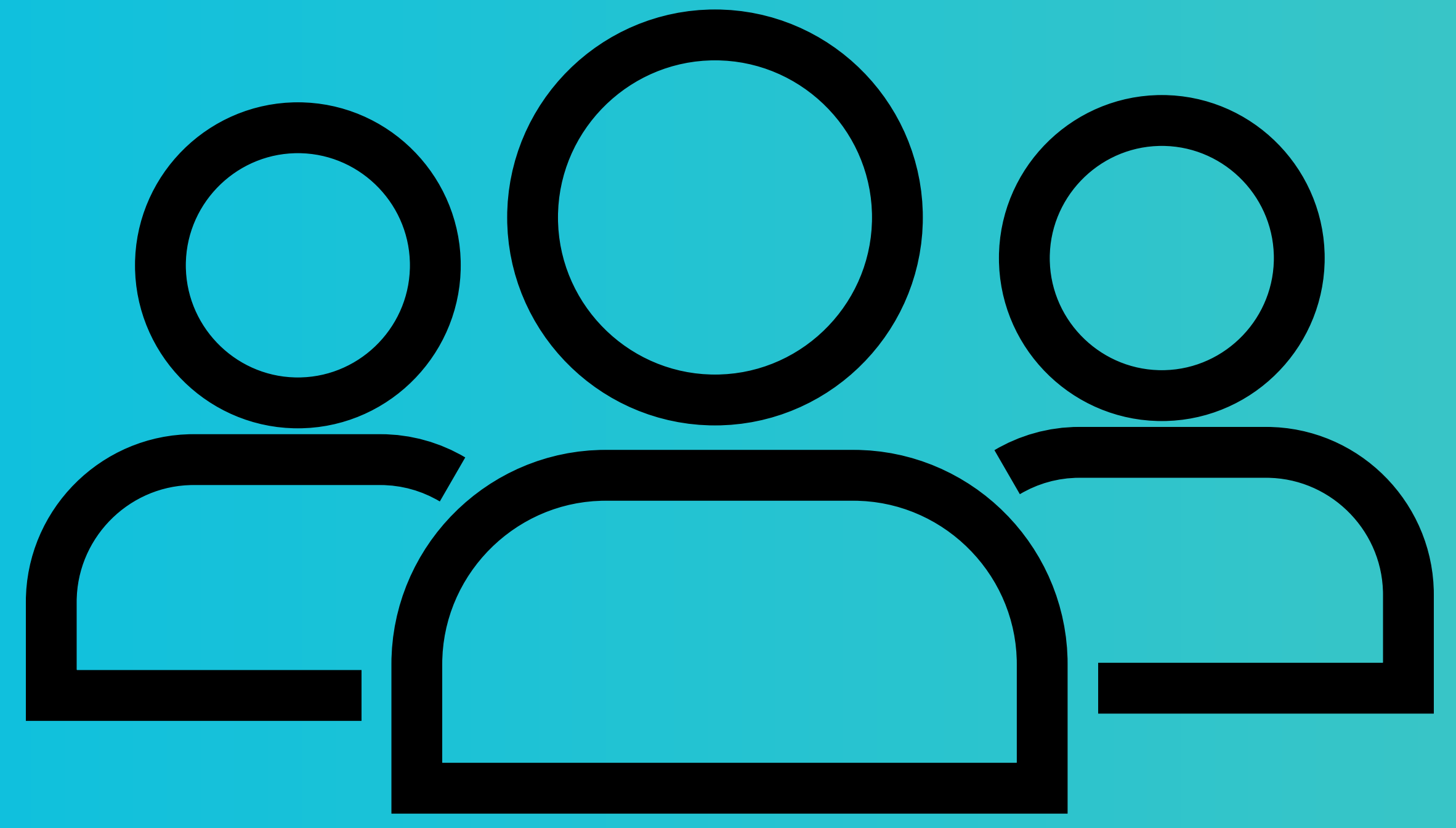
Because your loneliness is not a product

Every year, anxiety and depression affect more than 359 million people worldwide.

When you can't talk about what's really wrong or when you can't talk at all because of rejection there's H.A.AI. H.A.AI isn't meant to replace human beings. Its purpose is to take the place of that stuffed toy that once served as your psychologist, or that imaginary friend. H.A.AI also isn't designed to isolate you from the social world in a more comfortable environment quite the opposite. Its goal is to help you relearn how to talk, to understand others, and to socialize again.

That's why H.A.AI was designed as a companion that breaks away from overly mathematical and formal LLMs. H.A.AI aims to come as close to human as possible so it can help you understand humans better.

The 21st century problem



871,000

deaths per year₁

15%

10-19-year-olds experiences a
mental disorder₂

1/6

People feel lonely₁

Loneliness is more than just feeling alone. It's a biological signal that our need for human connection is not being met.

When this state persists, it can harm both mental and physical health, increasing the risk of anxiety, depression, poor sleep, and cardiovascular issues.

Psychologists describe loneliness as a self-reinforcing cycle: the more isolated we feel, the harder it becomes to reach out and rebuild relationships.

Over time, this disconnection can erode our sense of purpose, self-worth, and overall well-being.

"Loneliness reflects how you feel about your relationships. Depression reflects how you feel, period. Loneliness, like hunger, is a warning to do something to alter an uncomfortable and possibly dangerous condition."

John T. Cacioppo, Loneliness: Human Nature and the Need for Social Connection

So,

How can we help isolated people reconnect with others in an authentic and progressive way?

Create a local and confidential AI companion that helps users relearn how to discuss naturally, emotionally supporting them in their social progression, while respecting their privacy and without monetizing their loneliness.

Main Challenges:

- Simulation of authentic human discussions (conversational dataset)
- Absolute confidentiality (no API, everything local)
- Visual humanization (vtuber appearance) while maintaining AI/human distinction
- Accessibility (Text-to-Speech)

Technical Challenges:

- Creation of a quality dataset (sources: Discord, Reddit)
- Anonymization of conversational data
- Choice of LLM (Gemma3:4b a compact conversational model for better fine-tuning)
- Quality assurance (classification system to guide responses)
- Progress tracking system without being intrusive
- Performance optimization
- Vtuber character animation
- Easy to use
- Script for dependency prevention
- Long term memory
- Big size of data
- ...

Project Values

1. Respect for privacy and total confidentiality (local)
2. Non-commercial and accessible (Your loneliness is not a product, open source)
3. Transparency and honesty (Cartoon appearance, no unhealthy dependency)
4. Positive social impact (Project build to contribute to mental health)

A personal project

Towards the end of my middle school years, I developed anti-social behavior that brought me a lot of anxiety. To fill this relational void, I turned to everything but humans, particularly conversational AIs. While trying to create connections with these systems, I realized two things: first, talking to AIs did not fill this fundamentally human need; second, I discovered that some companies were monetizing loneliness, which deeply bothered me. I would have wanted an alternative that would help me relearn how to talk to humans, without my feelings being a commercial product.

the expected impact is:

- Reduction of social isolation: Provide an accessible first step for people who have lost confidence in their social abilities
- Emotional support: Offer non-judgmental support to understand and express emotions
- Measurable progress: Help users track their evolution in their ability to express themselves and manage their social anxieties
- Bridge to humans: AI is not an end in itself, but a stepping stone to find the way back to real human relationships
- Global impact: Reach millions of young people suffering from isolation, particularly post-pandemic where social anxiety has exploded

Areas for Improvement

1. Improve dataset quality and conversation disentanglement performance.
2. Add crisis detection for suicidal or distress signals.
3. Refactor code to reduce spaghetti structure and improve efficiency.
4. Create a unique Live2D Vtuber model with AI-generated motions.
5. Enhance text-to-speech quality and conversation fluidity.
6. Optimize for low-performance computers.
7. Add multi-language support.
8. Increase interaction with the user's environment.

Pipeline dataset

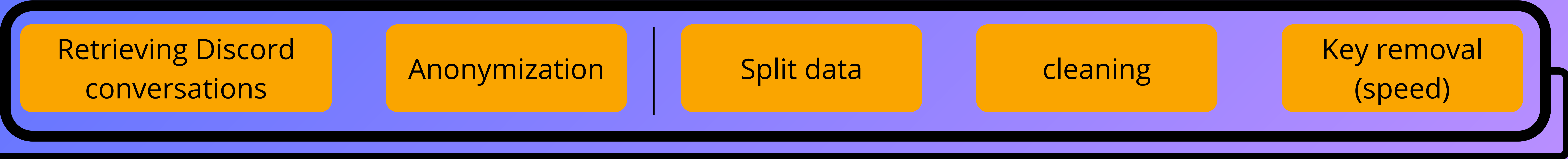
*Reddit API, respecting Reddit Terms of Service



≈ 20 %
Reddit Data

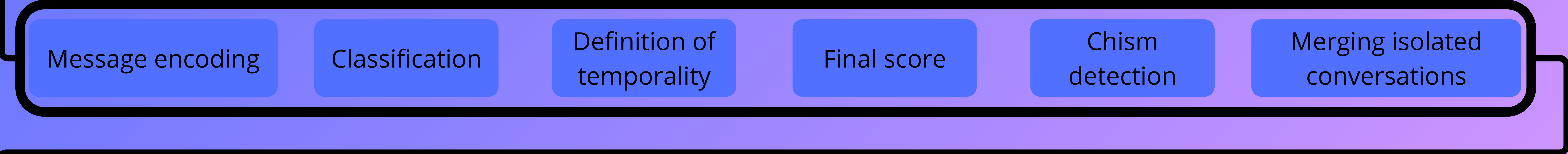
*With the moderator's agreement, and after informing the members and respecting Discord's Terms of Service

Data preparation

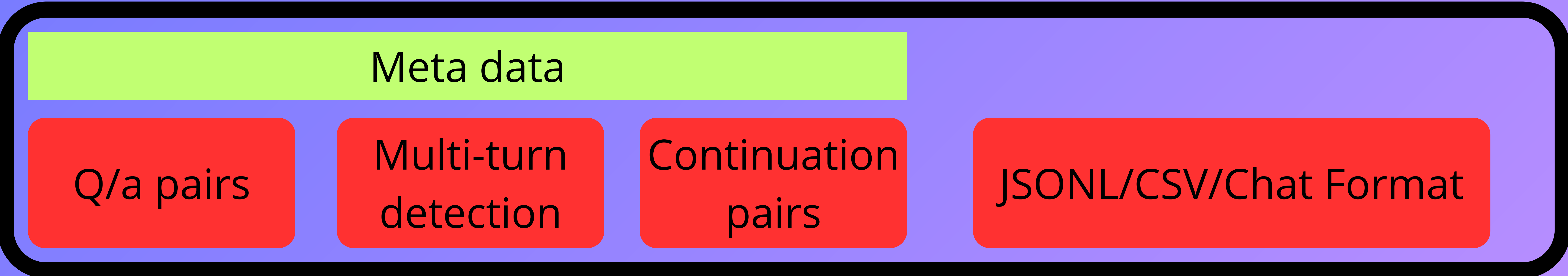


≈ 80 %
Discord data

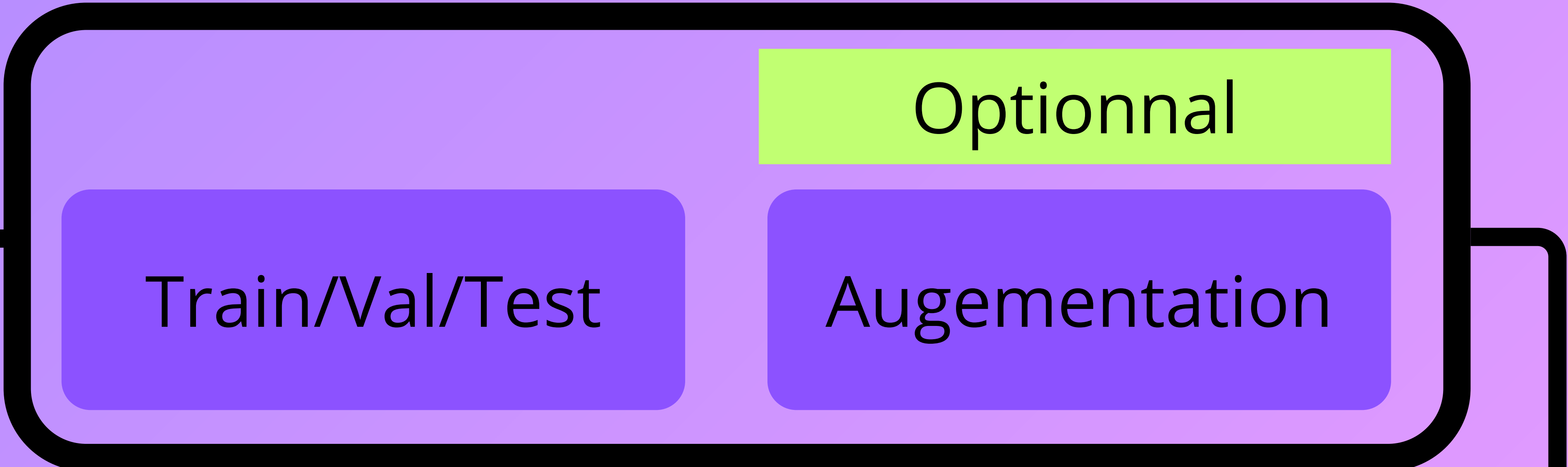
Disentangling conversations



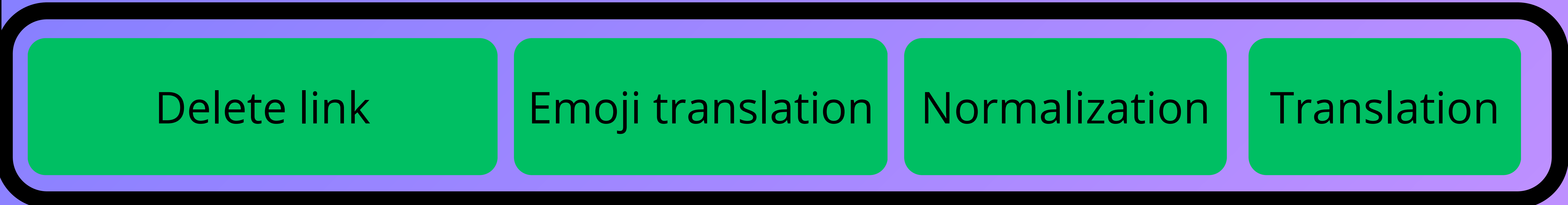
Dataset generation



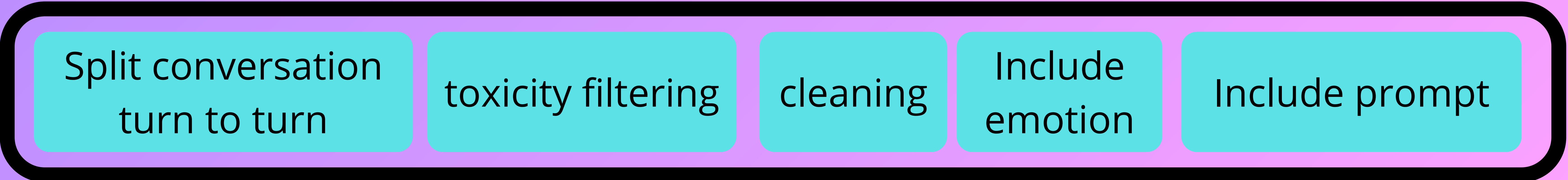
Validation



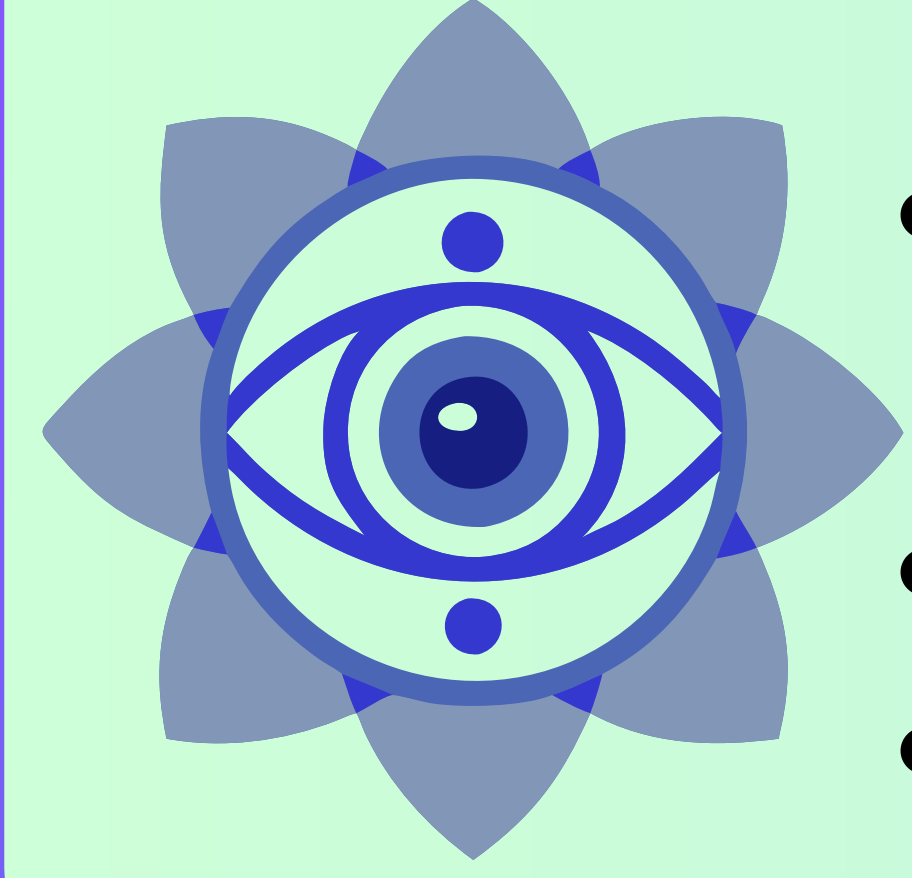
Normalization



Traitement final

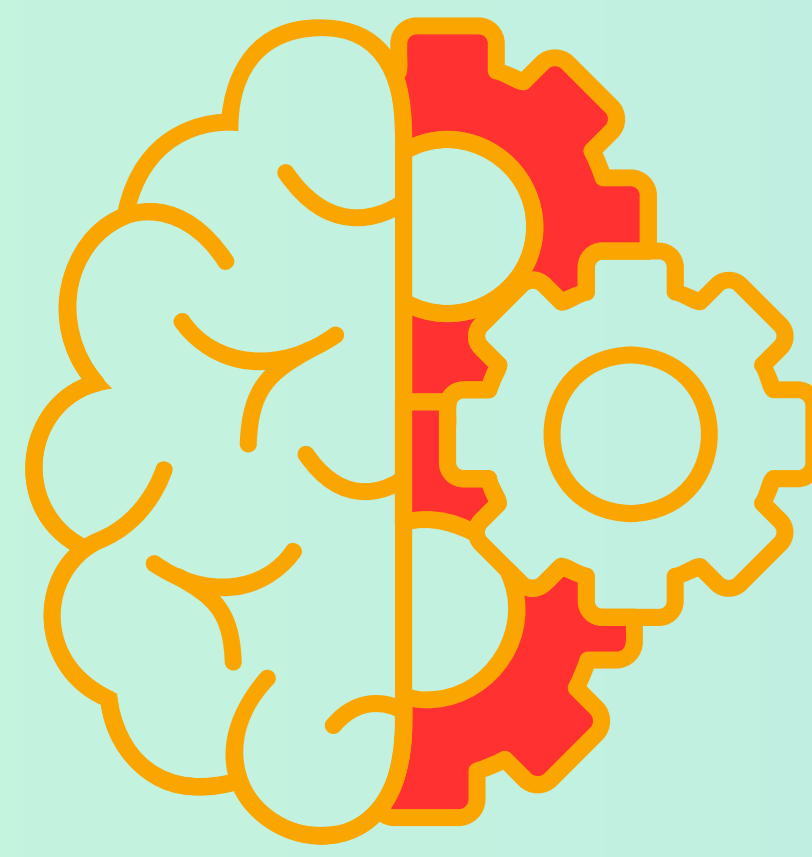


Big 5 AI : Perception



- Speech-to-Text (Whisper)
- Emotion Classifier
- 2 Irony Classifier

Representation & Reasoning



- Structured conversational dataset (Discord/Reddit)
- Emotion state tracking (emotion in/out)
- Classification system for response guidance

Learning



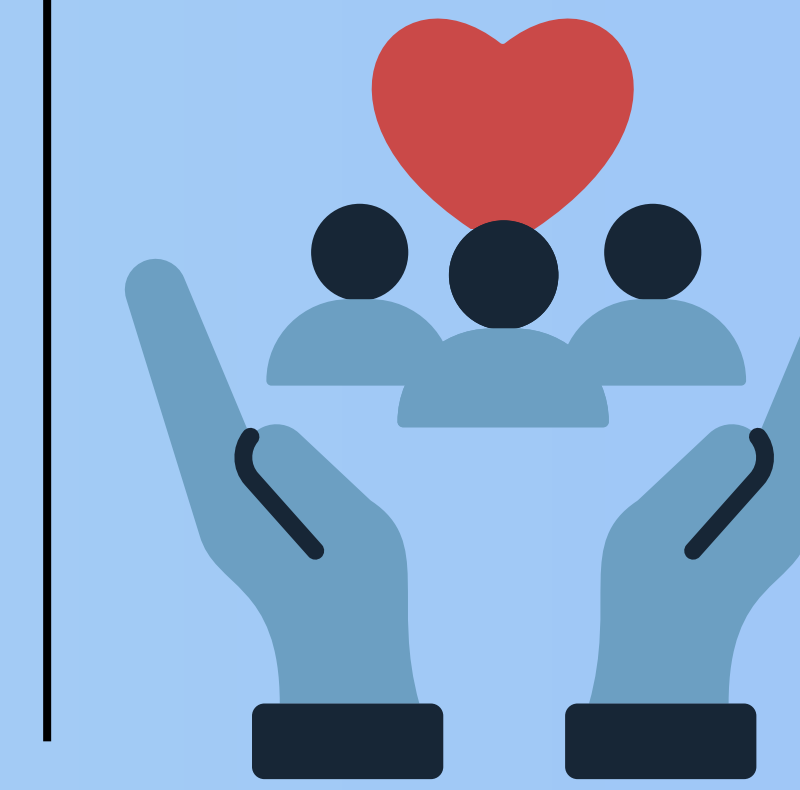
- Fine-tuned LLM on authentic human conversations
- Multi-stage data pipeline (anonymization, filtering, normalization)
- Conversation disentanglement for quality training

Natural Interaction



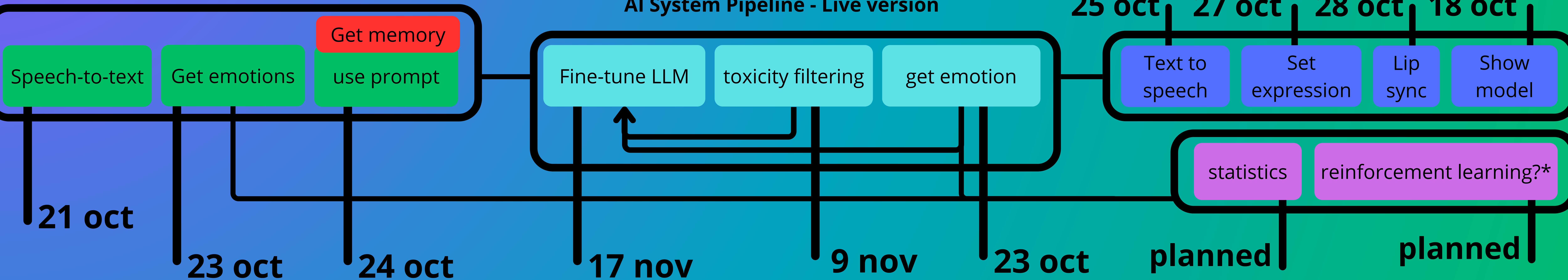
- Multimodal: text, speech-to-text, text-to-speech
- Live2D Vtuber with lip-sync and expressions
- Human-like but clearly AI

Societal Impact



- Positive: Mental health support, privacy-first, open source, helps users reconnect with real humans
- Ethical: Local-only (no data collection), non-commercial, transparent AI identity, dependency prevention

AI System Pipeline - Live version



Hello! I'm **Jules**, a **17-year-old** student from **France**. I'm developing this project **independently** for the **love** of code and caffeine-fueled nights



Sources :

who.int/groups/commission-on-social-connection/repo1
who.int/news-room/fact-sheets/detail/adolescent-mental-health2

Paper about conversation disentanglement that help me :
<https://aclanthology.org/attachments/P19-1374.Supplementary.pdf>
<https://aclanthology.org/P08-1095.pdf>



The code used is
100% open source

Libraries Used

- live2d-py – for rendering and controlling the Live2D model
- threading – to manage asynchronous processes
- numpy – for numerical operations and data handling
- whisper – for speech-to-text and voice input processing
- transformers – to load and fine-tune the language model
- scipy.io.wavfile – to handle raw audio files for TTS output
- torch – deep learning used by Whisper and Transformers
- piper – lightweight TTS engine for real-time speech generation
- pydub – to manipulate and convert audio formats
- code404nul/leaticia

*Future work could explore reinforcement learning to help the model learn how different emotional responses influence user well-being.

The model could see what type of response a negative emotional input elicits, and what type of response a second input elicits, a more positive one.

Regulatory Compliance:

- EU Regulation 2024/1689 (AI Act) - AI Transparency
- EU Regulation 2016/679 (GDPR) - Data Protection
- Not subject to FDA oversight (General Wellness, 2016)
- Compliant with FTC Act Section 5 - Consumer Protection

Personal project not validated by any medical organization. No therapeutic claims. 100% local data storage. (Emotion can be stored only.)