Fiche&Chips - AI Specifications

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Introduction

Our project "**Fiche&Chips**" aims at providing a platform to play D&D role play games.
We want to integrate an AI that may do the game master job.
This document will define the specifications for the AI service.

Our suppositions are the following:
- We can generate a campaign whose plot has a tree of variations. We would use scraped data to build the dataset. We would use a pre-trained model and finetune it.
- We can recognize and classify violent or peaceful speeches. We would build our own classifier with scraped data.
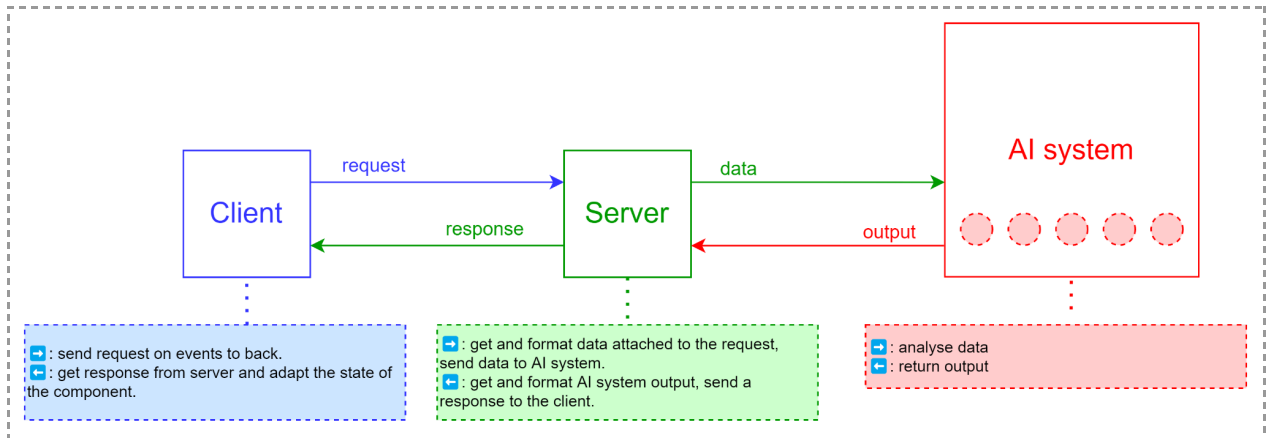- We can generate text in accordance with sentiment and context.

These are *AI* specifications, but we'll have to do a mix of:
- our own trained models
- pretrained open-source models
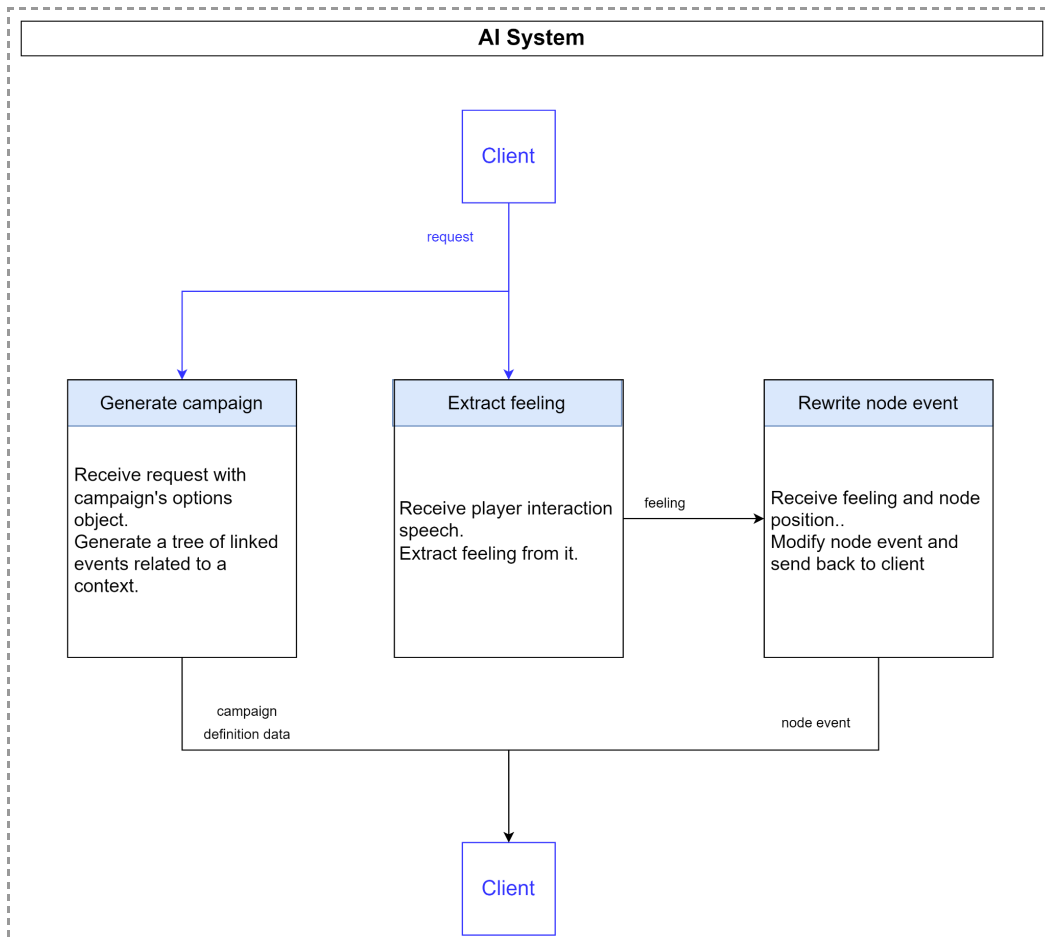- classic programmation approach

That is why this document will be presented as a collection of interdependent tasks.

AI Service map

global architecture

Client —request→ Server —data→ AI system

Server —response→ Client

AI system —output→ Server

Client:
➡️ : send request on events to back.
⬅️ : get response from server and adapt the state of the component.

Server:
➡️ : get and format data attached to the request, send data to AI system.
⬅️ : get and format AI system output, send a response to the client.

AI system:
➡️ : analyse data
⬅️ : return output

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architecture AI System

AI System

Client

request

Generate campaign

Receive request with campaign's options object.
Generate a tree of linked events related to a context.

Extract feeling

Receive player interaction speech.
Extract feeling from it.

feeling

Rewrite node event

Receive feeling and node position..
Modify node event and send back to client

campaign definition data

node event

Client

AI SYSTEM

Spécifications

Our Ai system have following tasks:

must	success criteria
provide a service to interact with models.	models are in production
provide the service in a reasonable amount of time.	service must answer under 5 seconds for most users
be passive and react to user behavior.	game must timeout if user does not play
no expensive usage cost.	

should	success criteria
be scalable.	models can be improved, number of users can increase.
generate data to improve the system.	produce useful data, improve models metrics.

may
be a microservice, a library or a controller
use a queue for users
be an independant api
generate statistics

Generating a campaign

This mission consists in generating the data used to play a D&D game.

Spécifications

Our system dedicated to this task have the following tasks:

must	success criteria
generate a data structure that define the campaign	campaign data present and persistent
generate flexibles plot	campaign plot can evolve during game
generate configurable campaign	campaign properties are dependant to user configuration sended
keep track of the impact and evolution of players	

should	success criteria

may
modify campaign event nodes can be represent arbitrary part of game master

Subpart:
- Tools
- Testing
- succes criteria
- Evolution
- Changelog

- data structures (!important!): campaign, campaign's context.

Extracting feeling

Spécifications

Our system dedicated to this task have the following tasks:

must	success criteria
extracting feeling from player speech	
have metrics on model have at least 70% success	campaign plot can evolve during game
work with french text data	

should	success criteria
be fast	under 4 seconds

may
use pretrained models
be scalable

Subpart:
- Tools
- Testing
- succes criteria
- Evolution
- Changelog
- data structure

Rewrite campaign scenario events

Spécifications

Our system dedicated to this task have the following tasks:

must	success criteria

should	success criteria

may

Subpart:
- generate a situation in the context of an action during scenario
- Tools
- Testing
- succes criteria
- Evolution
- Changelog
- data structure

PLAN
- Goals
- Map
- Ai system spec
- Ai

FAQ
combien de temps l'IA doit elle garder en mémoire ce que votre joueur a fait récemment, et
quelles info seront stockée de manière durable ?
=> Durant toute la campagne -

Comment rendre l'histoire générée (fixe) fluctue grace au texte/parametres de l'utilisateur ?
=>

Comment évolue l'histoire avec les intentions de l'utilisateur.

Quelle stratégie pour collecte progressive de donnée:

Problématiques:
    -    comment modéliser une compagne, trop de complexité.
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