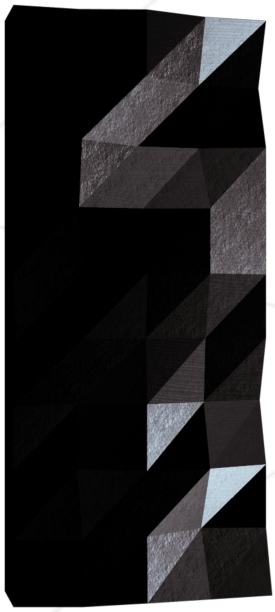


Micro-Immersion GenAI

More than just chitchat

Summary: Integrate AI into your apps to tackle real-world problems.

Version: 1.0

Contents

Chapter I

Foreword

Stochastic parrot

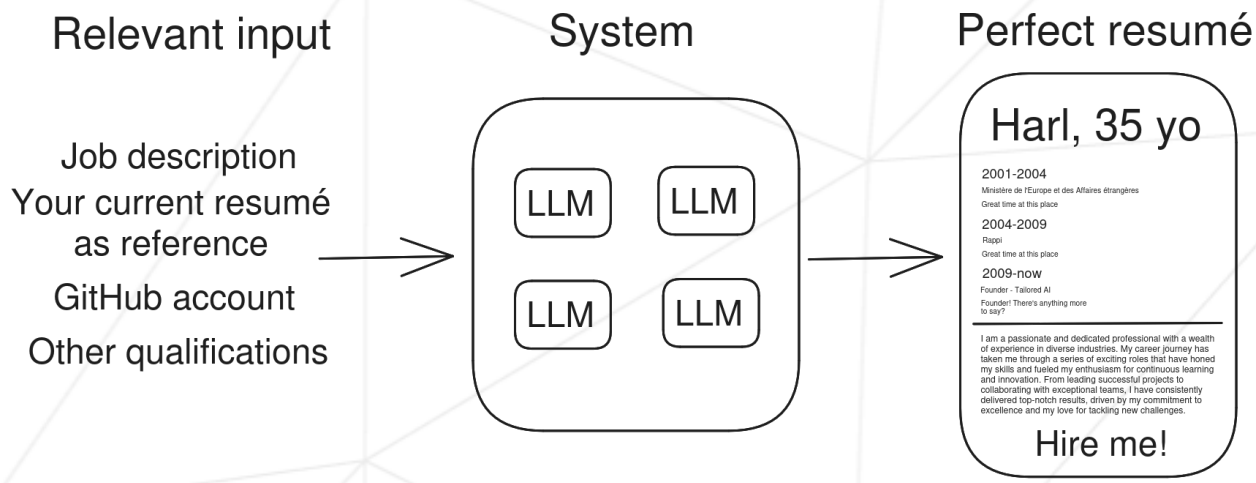
In the field of machine learning, the phrase 'stochastic parrot' serves as a metaphor to illustrate the idea that, although large language models can produce coherent language, they lack an understanding of the meaning behind the language they generate. This term was introduced by Emily M. Bender in the 2021 AI research paper titled 'On the Dangers of Stochastic Parrots: Can Language Models Be Too Big? :parrot:' authored by Bender, Timnit Gebru, Angelina McMillan-Major, and Margaret Mitchell.[1]

[1] https://en.wikipedia.org/wiki/Stochastic_parrot

Chapter II

Introduction

In this project, you'll be building a multi-agent system designed to create the best possible resumé based on a job description. The system consists of various agents, each responsible for a specific task to enhance and refine the resumé. By working together, these agents iteratively improve the document, making sure it's perfectly tailored for the job application.



To achieve the best results, the system can occasionally search the internet and local documents, and also seek human feedback for further refinement. Users can contribute additional information and guide improvements through a user-friendly frontend, ensuring a better yet resumé.

Chapter III

General instructions

- This project will be reviewed by humans.
- For this project, you must use Python.
  - Python version >= 3.10
  - Tip: Use a virtual environment (venv) in your project. It's also good to install the dependencies in your venv.
- Using Python, we will leverage various libraries to help get the work done:
  - AutoGen[1] will be our primary library.
  - For the frontend, we will use Streamlit[2], the most popular library for frontend systems leveraging AI.
- As for models, we will use Google's models.
  - We will stick with Google AI Studio[3], which provides a generous token per minute quota for `free` with a Google account.
  - We recommend using `gemini-1.5-flash` for the highest quota. You can also try different models for various agents.
- As usual, there should be no errors or warnings in any console. Note that HTTP without HTTPS browser warnings are not considered an issue.

[1] https://microsoft.github.io/autogen/
[2] https://streamlit.io/
[3] https://ai.google.dev/aistudio

Chapter IV

Mandatory part

IV.1 Common features

- Inputs:
  - Job description URL: Provide the URL of the job description for the position you are applying for.
  - GitHub account: Include the URL to your GitHub profile where all your projects are hosted.
  - Additional qualifications:
    - Certifications: List any certifications you hold.
    - Other qualifications that are relevant to the job.
  - Current resumé: Optionally, upload your current resumé to serve as a base for the new one.
  - Human feedback: Human feedback can be provided when agents determine it is necessary.
- Input fields:
  - Fields to input the job description URL, GitHub profile URL, and LinkedIn profile URL.
  - Upload fields for additional qualifications and current resumé.
  - Button to start the process.
  - Section to display the generated resumé.
  - Configuration options for entering the API key for the LLM.
  - Field to provide human feedback if needed.
  - Field to point to local documents for additional input.
  - Toggle to enable or disable internet search.
- Output:
  - A newly crafted, improved resumé in markdown format, perfectly tailored for the job.
- Additional:

- Ensure the frontend is user-friendly and intuitive. It should be easy to understand what's happening, and including explanations of the outputs is recommended.
- Handle re-requests and retries correctly to prevent the app from crashing or becoming unresponsive. If it cannot provide an answer, inform the user.

Chapter V

Turn-in and peer-evaluation

V.1 Turn-in

Submit your work to the GitHub repository generated when you accepted the project invitation.

V.2 Peer-evaluation

Someone from Bocal will evaluate your project and code, assessing the quality of your work.