



# OPEN CAMPUS CHATBOT

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# Agenda



Architecture



Web Scraping



Data Ingestion



Custom Tools



RAG



Demo



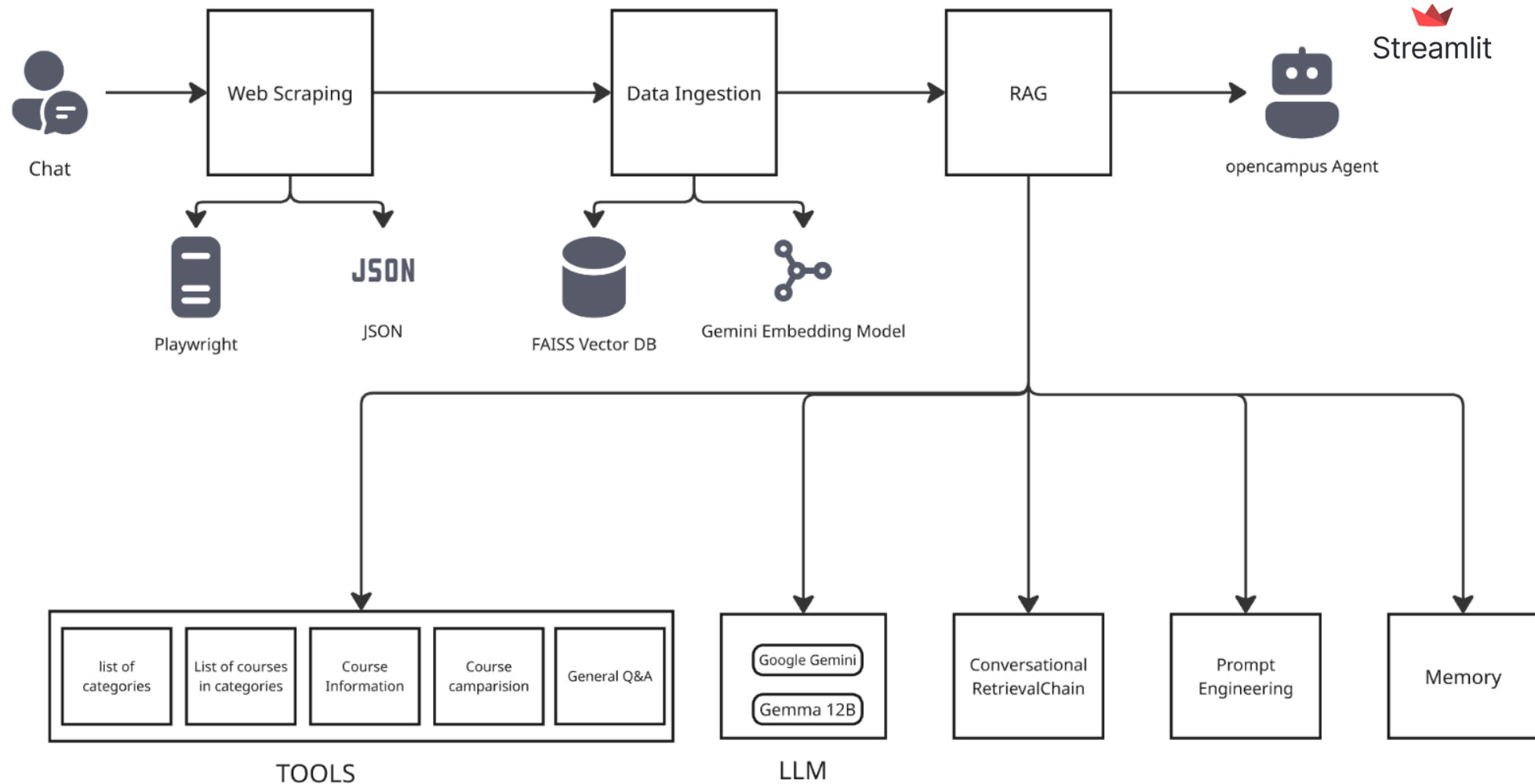
Future Work



Questions

# Architecture

## OPEN CAMPUS CHATBOT



# Web Scrapping

## Open Campus Courses Categories

1. Creative, Social & Sustainable
2. Business & Startup
3. Tech & Coding
4. Degrees



PYTHON



Playwright

```
{
  "title": "From LLMs to AI Agents",
  "url": "https://edu.opencampus.sh/en/course/563",
  "details": {
    "url": "https://edu.opencampus.sh/en/course/563",
    "description": "This new hands-on course shows you how Large Language Models can be used and combined with",
    "mentor": [
      "Henrik Horst"
    ],
    "what_we_will_learn": [
      "LLMs",
      "Retrieval Augmented Generation",
      "Workflows",
      "Agents"
    ],
    "day_time_summary": "THURSDAY 18:00 - 19:30",
    "ects": "5",
    "location": "KIEL + ONLINE",
    "language": "ENGLISCH",
    "information": "What you getRamp-up course for the new fascinating capabilities of LLMs and the emerging",
    "course_sessions": [
      {
        "date": "17.04.2025",
        "time": "18:00 - 19:30",
        "topic": "Course Introduction & First steps",
        "location_text": "Starterkitchen, Kuhnkestr. 6, 24118 Kiel",
        "location_url": "https://www.google.com/maps/search/?api=1&query=Starterkitchen%2C%20Kuhnkestr.%2C%2024118%20Kiel"
      }
    ]
  }
}
```

# Data Ingestion

1. Data Loading
2. Document Preparation
3. Text Splitting & Chunking
4. Embedding
5. FAISS



FAISS



text-embedding-004

# CUSTOM TOOLS

List Categories

Provides a comprehensive list of all available course categories.

List Courses

Provides lists all individual courses available within a *specified identified category*.

Course Details

Provides detailed information for a specific course.

Compare courses

Provides a side-by-side comparison of two courses.

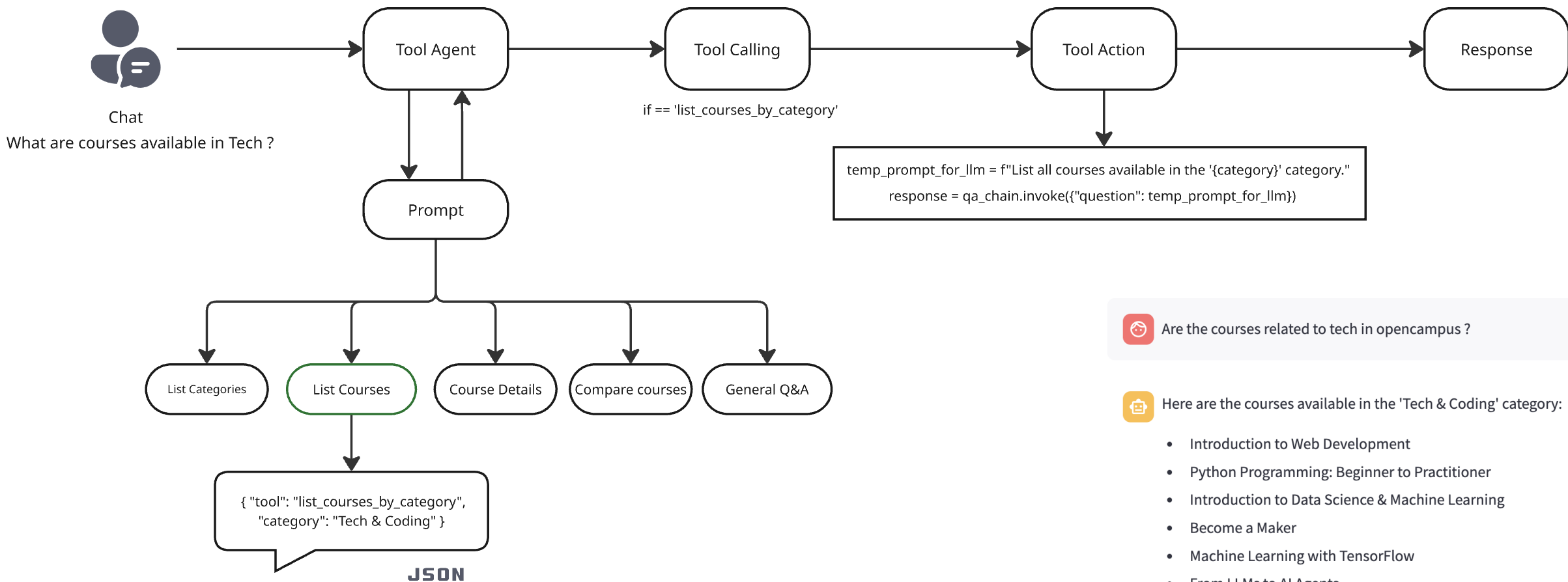
General Q&A

Handles other queries that do not directly map to specific tools mentioned above.


```

qa_chain = ConversationalRetrievalChain.from_llm(
    llm=llm,
    retriever=_faiss_db.as_retriever(search_kwargs={"k": 7}),
    memory=memory,
    combine_docs_chain_kwargs={"prompt": COMBINE_PROMPT, "document_prompt": document_prompt_template},
    return_source_documents=True,
)

```



 Are the courses related to tech in opencampus ?

 Here are the courses available in the 'Tech & Coding' category:

- Introduction to Web Development
- Python Programming: Beginner to Practitioner
- Introduction to Data Science & Machine Learning
- Become a Maker
- Machine Learning with TensorFlow
- From LLMs to AI Agents

Would you like more detailed information about any of these courses?



DEMO



# Future Works

- Build End-End pipeline which automatically fetches data from website or run schedule jobs to fetch data monthly / weekly.
- Enable course registration through chatbot itself.
- Integrate with other Large Language Models.
- Integrate with our channel to get updates and answer common questions which are related to course.



QUESTIONS



THANK YOU