Personal AI Journalist (NewsNinja🥷)

News & Reddit Scraping via MCP

End-to-End Project using Model Context Protocol (MCP)
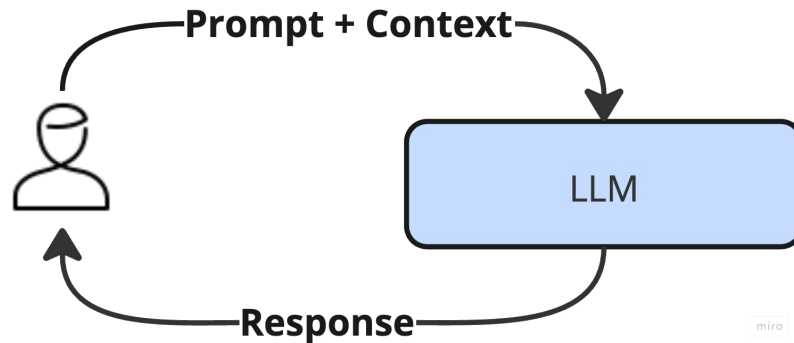Text to Scraping

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Topics Covered

- Theoretical Concepts
  - LLM vs AI Agent
  - What is MCP
- Practical Learning
  - AI Journalist–End to End Project
  - Tools & Technologies
    - Streamlit (Frontend)
    - FastAPI (Backend)
    - Bright Data MCP (Web Scraping)
    - Web scraping & anti-bot mechanisms (Text to scraping)
    - Groq/OpenAI/Ollama/Anthropic (LLM)
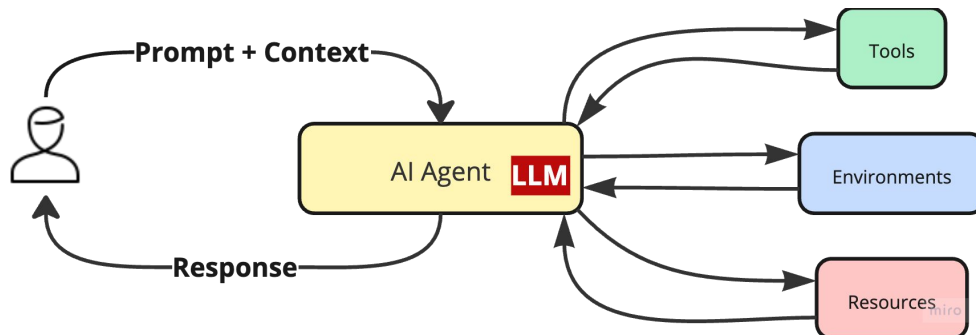   - Elevenlabs/TTS (Text-to-Speech)

LLM–Large Language Model

- A static piece of software that generates human-like text or analyzes input based on pre-trained knowledge.
- Processes or explain the content you provide
- No real-time data access.
- Cannot perform external actions.

Prompt + Context

LLM

Response

miro

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AI Agent with Workflow

- A dynamic system that
    - autonomously performs tasks,
    - makes decisions
    - Interacts with tools/environments
    - Achieve goals.
- Can fetch emails proactively, interact with APIs, and execute actions without explicit step-by-step instructions.

Example Task: Support with Emails

LLM

- Can only perform text based interactions
- Analyzes, summarizes, responds
- Needs a prompt for every action
- User can input:
  - Explain this email
  - Respond to this email
  - Always with context

AI Agent

- AI Agent can do everything (with required tools)
- User can input:
  - Get me the latest emails from Hassan
  - Opens Email App → Searches emails from Hassan → Gets back information
  - Agent searches inbox, filters by sender, retrieves results
- Tools that help perform such actions
  - Internet & laptop/hardware
  - Open Email App
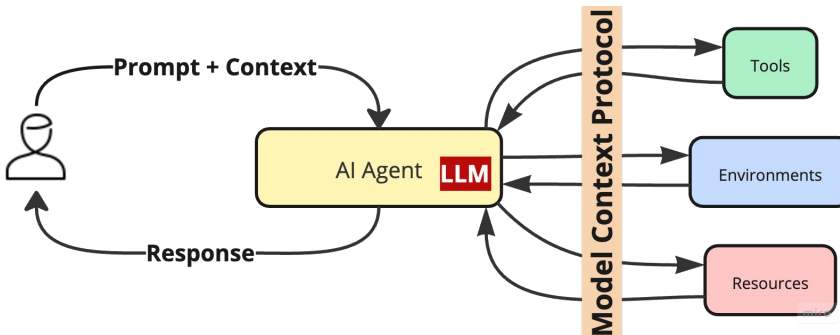 - Filter mails from "Hassan"
  - Summarizer

Model Context Protocol–MCP

MCP is an open standard developed by Anthropic

- lets LLMs interact with external tools, APIs, and data sources
- Consistent and secure way
- A universal connector, allowing LLMs to perform real-world tasks
  - Scraping websites
  - Querying databases
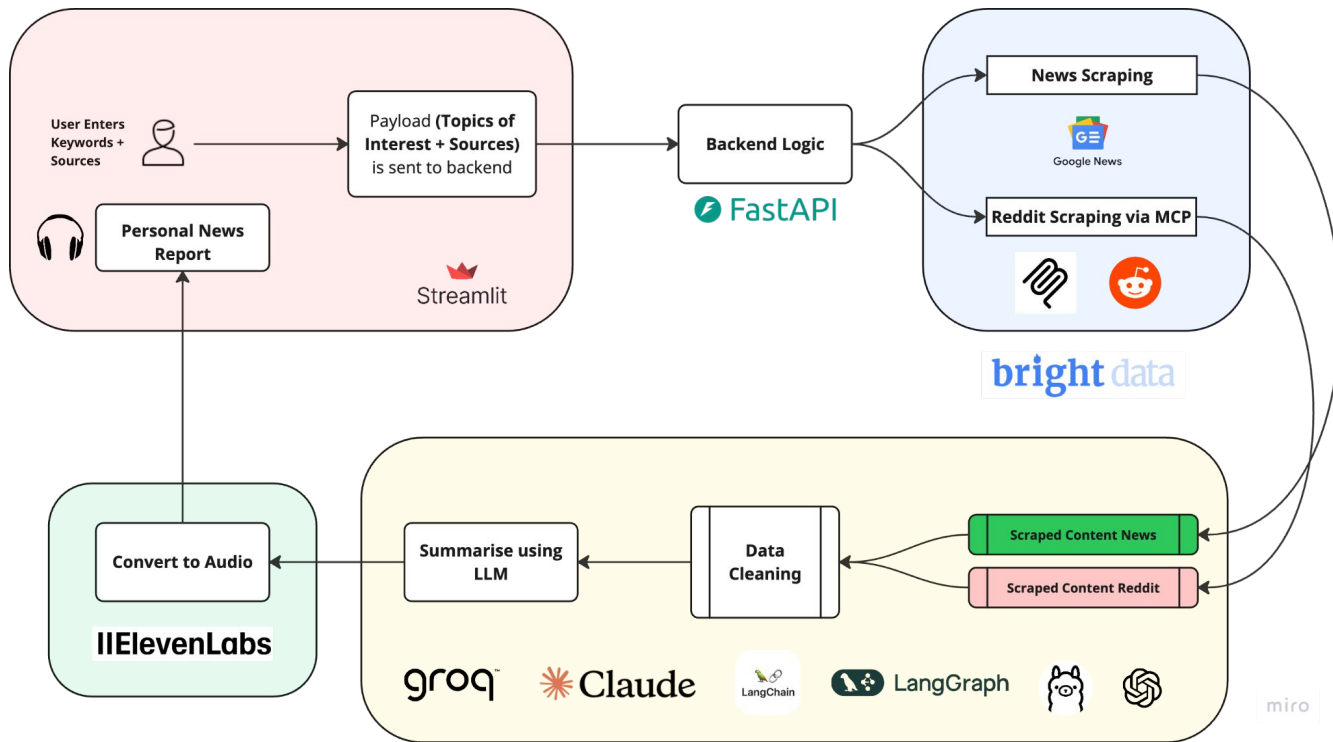 - Triggering scripts, etc

Advantages

- Standardization
- Flexibility and Scalability
- Enhanced LLM Capabilities

Personal AI Journalist

NewsNinja 🥷

Technical Architecture

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Code Setup

Phase 1: Setup Frontend

- Setup Streamlit
- User is able to write topics and mention sources of interest
- Show response from backend

Phase 2: Setup Backend Logic

- Scrape Data
- Send to LLM summarizer
- Convert to Audio
- Send to frontend

Phase 3: Setup Scrapers & Bright Data setup

- Setup scraper with BrightData MCP
- Text to scraping with Bright Data
- Setup Fast API endpoint
- Bring everything together

Phase 4: Bring everything together

- Bind frontend and backend
- Test everything together

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Problems with Autonomous Solutions

- Problems with Operator (Amazon, Reddit, etc):
  https://www.linkedin.com/posts/akshay-pachaar_watch-this-before-you-buy-openai-operator-activity-7299807308321062915-5WaX/
- Companies are blocking access to anything that looks AI–CAPTCHA, Puzzles etc:
  https://www.linkedin.com/posts/svpino_companies-are-blocking-access-to-anything-activity-7300141583830552579-eEnp/
- Manual Intervention with Operator:
  https://www.youtube.com/watch?v=W1QydKNqU4E
- Sales Bot: https://www.youtube.com/watch?v=YGzT3sVdwdY
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