MICROSOFT
HACKATHON INNOVATION CHALLENGE
DECEMBER 2024

GenSearch:

Revolutionizing Search Through AI and RAG

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The Challenge of Modern Information Retrieval

Limited Relevance: Traditional search engines often fail to understand user intent, leading to irrelevant results.

Lack of Context Awareness: Current systems can't adapt to evolving search queries or provide personalized results.

Static Search Results: Relying on static keyword matching, current technologies struggle with dynamic, complex information.

Increased Data: As the volume of data grows, it's harder to search efficiently without a deeper understanding of context.

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The Solution:
GenSearch

- GenSearch leverages AI to understand the context behind search queries for more accurate results.
- Tailors search outputs based on user history and preferences.
- Built to handle large-scale data operations, ensuring smooth performance across industries.
- Supports text, image, and voice inputs, broadening search possibilities and improving accessibility.

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TECH STACK

Aure Services Used

Search Cognitive service

Azure AI Services

Azure OpenAI

Document intelligence

AZURE SPEECH

Translator

Storage account

Frontend and Backend

HTML

CSS

Python

Flask

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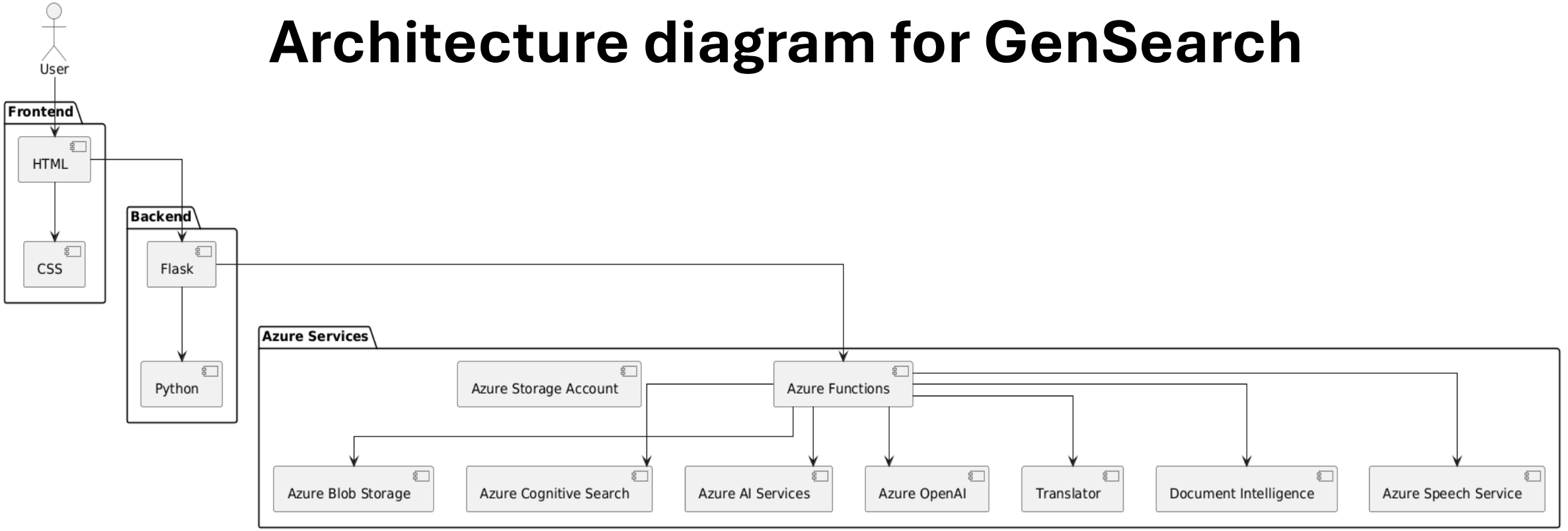
Architecture diagram for GenSearch



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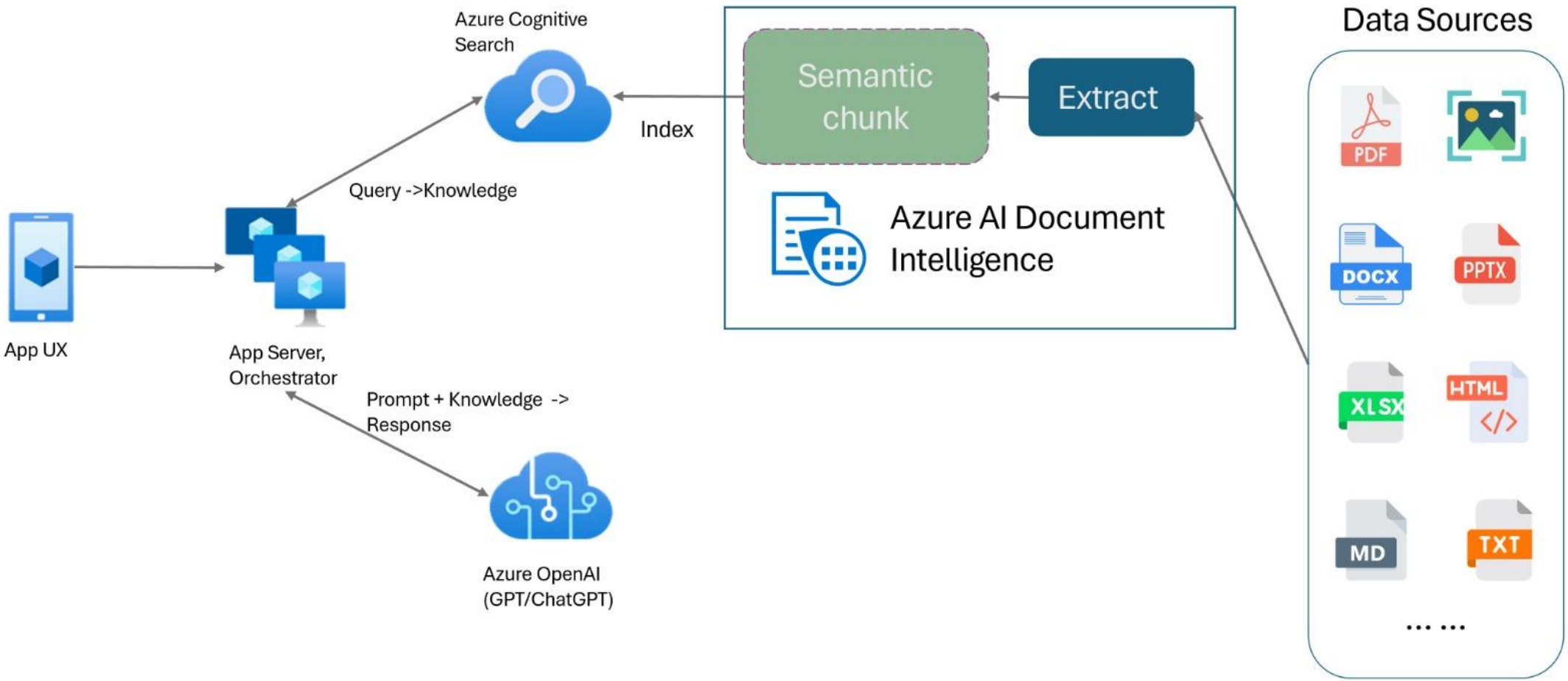

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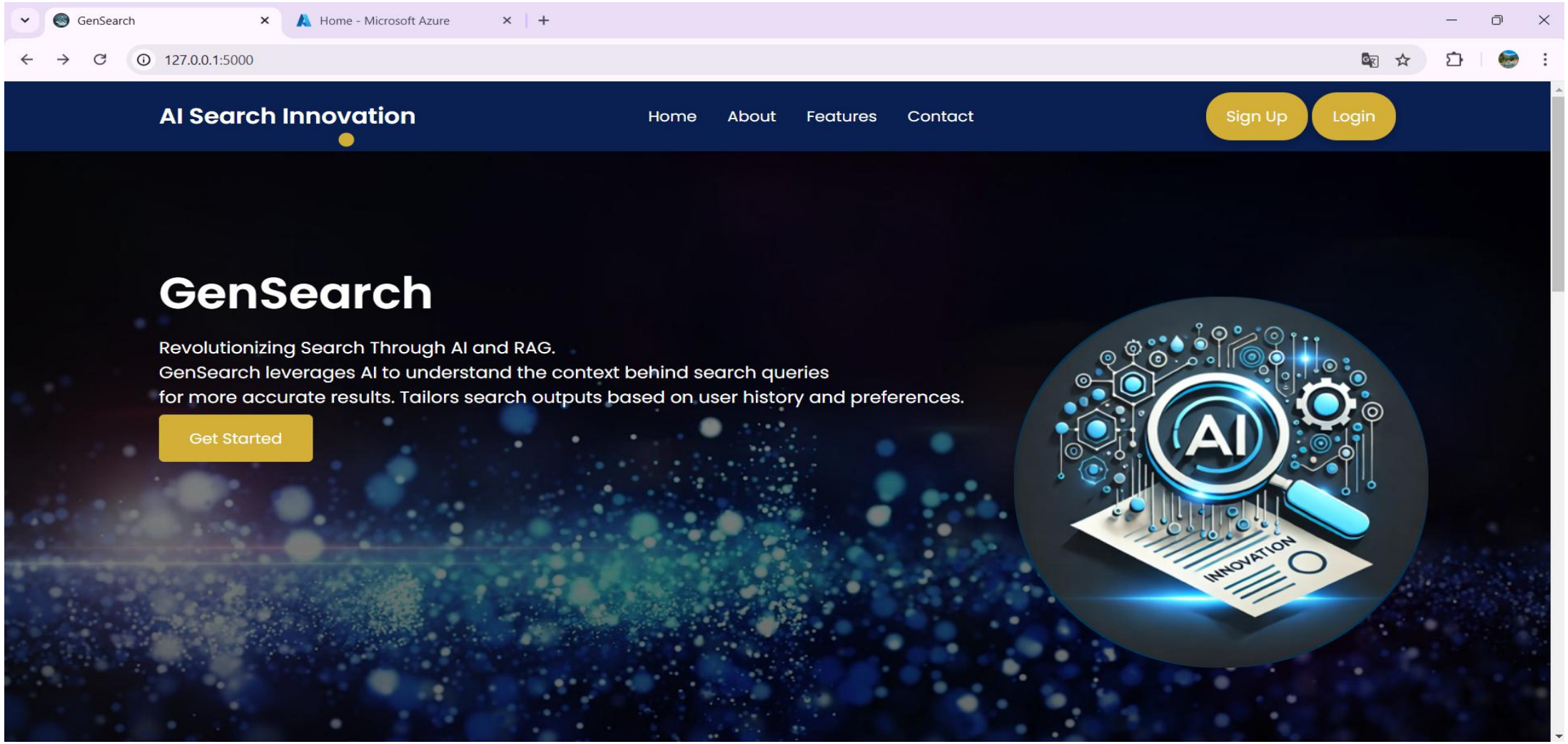
Live Demo



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Future Vision and Closing Remarks

Key Takeaways:

- GenSearch will expand its platform integration (mobile, desktop, voice assistants) and refine personalization algorithms to better adapt to user behavior for a more seamless and intuitive experience
- Implement machine learning models that predict search intent before users finish typing.
- Strengthen privacy protocols to ensure secure handling of sensitive data in search results.

Future Enhancements:

- Future versions of GenSearch will include **multilingual support**, more AI models, and improved integration with IoT devices.
- Leveraging user feedback and data to improve search algorithms, enhancing user satisfaction.

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Hackers

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