■■ NY State AI Hackathon

AI Accelerators for Government Services

Repository: github.com/msftsean/ai-hackathon-use-cases

Event: NY State AI Hackathon for Public Sector | January 13-14, 2026

Location: SUNY ETEC Albany

■ Executive Summary

What Are Accelerators?

Accelerators are a Microsoft term for **complete, working applications** that serve as production-ready starting points for your own solutions. Rather than building from scratch, accelerators let you:

- ■ **Learn faster** - See real-world implementations of AI patterns and best practices
- ■ **Build securely** - Start with security, compliance, and responsible AI already built in
- ■ **Ship sooner** - Extend working code instead of writing boilerplate from zero
- ■ **Reduce risk** - Leverage tested, validated architectures designed for government use

Think of accelerators as **fully-functional blueprints** - they work out of the box, but are designed for you to customize and extend for your specific agency needs.

This Repository - 7 AI Accelerators

Challenge	Accelerator Solution
■ Citizens can't find answers	AI chatbot with citations
■ Document processing backlogs	Automated OCR & validation
■ Emergency coordination gaps	Multi-agent planning system
■ Policy compliance burden	Automated document review
■ Siloed agency knowledge	Cross-agency secure search
■■ NYC citizen services (.NET)	RAG-powered .NET chatbot
■ NYC citizen services (Python)	RAG-powered Python chatbot

All accelerators comply with NY State's **LOADinG Act** and **RAISE Act** requirements for transparent, accountable AI in government.

■ The 7 AI Accelerators

1■■ Constituent Services Agent

Status: Production Ready | **Tests:** 43 Passing | **Demo:** 5 min

■ **Purpose:** AI-powered chatbot answering citizen questions about NY State services

■ **Key Features:**

- ■ Natural language Q&A; about SNAP benefits, driver's licenses, unemployment, Medicaid
- ■ Citation-backed responses with source documents
- ■ Confidence scoring and human escalation when uncertain
- ■ Multi-language support (8 languages)
- ■ WCAG 2.1 AA accessible web interface

Tech Stack: Azure AI Foundry + Foundry IQ + Semantic Kernel + Flask

2■■ Document Eligibility Agent

Status: Production Ready | **Tests:** 86 Passing

■ **Purpose:** Automated processing of eligibility documents (W-2s, pay stubs, utility bills)

■ **Key Features:**

- ■ Email inbox monitoring for document submissions
- ■ OCR and intelligent data extraction using Azure Document Intelligence
- ■ Confidence scoring for all extracted fields
- ■ PII detection and automatic masking
- ■ Validation rules (document age, completeness)

Tech Stack: Azure Document Intelligence + Microsoft Graph + Semantic Kernel + Flask

3■■ Emergency Response Agent

Status: Production Ready | **Tests:** 62 Passing | **Pattern:** Multi-Agent

■ **Purpose:** Multi-agent system for emergency response planning and coordination

■ **Key Features:**

- ■ Emergency scenario simulation (hurricane, fire, flood, winter storm, public health, earthquake)
- ■■ Real-time weather integration
- ■■ Multi-agency resource coordination (FDNY, NYPD, OEM, DOT, MTA)
- ■ Evacuation route planning with bottleneck analysis

- ■ Historical incident analysis for lessons learned

Tech Stack: Semantic Kernel + Azure AI Foundry + Weather APIs + Multi-Agent Orchestration

4■■ Policy Compliance Checker

Status: Production Ready | **Tests:** 14 Passing | **AI Powered**

■ **Purpose:** Automated review of policy documents against compliance rules

■ **Key Features:**

- ■ Document parsing (PDF, DOCX, Markdown)
- ■ Rule-based compliance checking with regex patterns
- ■■ Severity categorization (Critical, High, Medium, Low)
- ■ Compliance scoring (0-100)
- ■ AI-powered analysis with Azure OpenAI
- ■ Detailed recommendations for each violation

Tech Stack: Azure AI Foundry + Semantic Kernel + Document AI

5■■ Inter-Agency Knowledge Hub

Status: Production Ready | **Tests:** 38 Passing | **Cross-Agency Search**

■ **Purpose:** Cross-agency document search with permission-aware results

■ **Key Features:**

- ■ Unified search across 5+ agency knowledge bases (DMV, DOL, OTDA, DOH, OGS)
- ■ Entra ID authentication with role-based access
- ■■ Permission-aware result filtering
- ■ Citation tracking for LOADinG Act compliance
- ■ 7-year audit log retention

Tech Stack: Microsoft Foundry + Foundry IQ + Azure AI Search + Entra ID

6■■ Virtual Citizen Assistant (.NET)

Status: Production Ready | **Tests:** 22 Passing | **.NET 9**

■ **Purpose:** RAG-powered AI assistant for NYC government services built with .NET

■ **Key Features:**

- ■ AI chat assistant with source citations
- ■ Semantic, keyword, and hybrid search modes
- ■ Category browser with visual grid layout
- ■ Document details with print and share
- ■ Bootstrap 5.3 responsive UI

Tech Stack: .NET 9 + ASP.NET Core MVC + Semantic Kernel 1.65 + Azure AI Search + Azure OpenAI

7■■ Virtual Citizen Assistant (Python)

Status: Production Ready | **Tests:** 2 Passing | **Pattern:** RAG
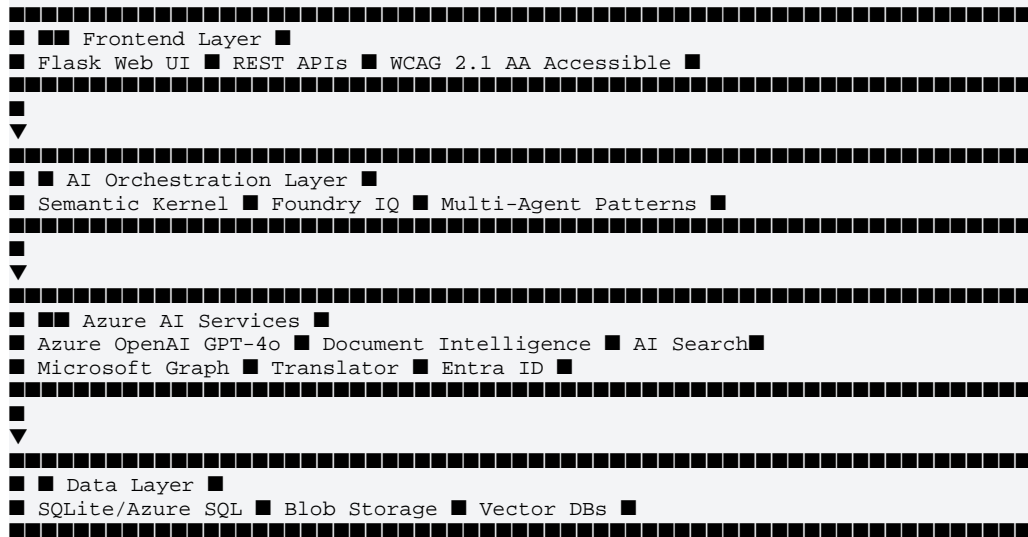
■ **Purpose:** RAG-powered AI assistant for city government services built with Python

■ **Key Features:**

- ■ Natural language Q&A; about city services
- ■ Vector search + keyword search + hybrid search modes
- ■ Plugin architecture with Semantic Kernel 1.37
- ■ Appointment scheduling with mock service
- ■ Citation-backed responses with source documents

Tech Stack: Semantic Kernel 1.37 + Azure AI Search + Azure OpenAI + Flask

■■ Technical Architecture

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■ ■■ Frontend Layer ■
■ Flask Web UI ■ REST APIs ■ WCAG 2.1 AA Accessible ■
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■ ■ AI Orchestration Layer ■
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■ ■■ Azure AI Services ■
■ Azure OpenAI GPT-4o ■ Document Intelligence ■ AI Search■
■ Microsoft Graph ■ Translator ■ Entra ID ■
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■ ■ Data Layer ■
■ SQLite/Azure SQL ■ Blob Storage ■ Vector DBs ■
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■■ Compliance & Responsible AI

■ NY LOADinG Act Compliance

- ■ All AI decisions are logged with rationale
- ■ Human-in-the-loop for benefits determinations
- ■ Transparent citation of data sources
- ■ Bias testing across demographic groups

■ NY RAISE Act Requirements

- ■ AI assistance clearly disclosed to users
- ■ Accountability measures for automated decisions
- ■ Regular auditing and evaluation frameworks
- ■ Azure AI Evaluation integration for red-teaming

■ Security & Privacy

- ■■ Azure GCC (Government Community Cloud) compatible
- ■ PII detection and automatic masking
- ■ Role-based access control via Entra ID
- ■ Encrypted data at rest and in transit
- ■■ 30-day conversation data purge policy

■ Testing & Evaluation

Accelerator	Tests	Status
Constituent Services Agent	43	■ All Passing
Document Eligibility Agent	86	■ All Passing
Emergency Response Agent	62	■ All Passing
Policy Compliance Checker	14	■ All Passing
Inter-Agency Knowledge Hub	38	■ All Passing
Virtual Citizen Assistant (.NET)	22	■ All Passing
Virtual Citizen Assistant (Python)	2	■ All Passing
Total	**267**	**■ Production Ready**

■ Key Technologies

Technology	Purpose
Azure AI Foundry	AI development platform
Foundry IQ	Intelligent document retrieval
Semantic Kernel	AI orchestration framework
Azure OpenAI GPT-4o	Language model for Q&A
Azure Document Intelligence	OCR and document parsing
Azure AI Search	Vector search with security filters
Microsoft Graph	Email and document access
Entra ID	Authentication and authorization
Flask	Web framework for APIs
Pydantic	Data validation

■ Quick Start

```
# 1■■ Clone and navigate
cd newyork

# 2■■ Choose an accelerator
cd Constituent-Services-Agent # or any other accelerator

# 3■■ Create virtual environment
python -m venv venv
venv\Scripts\activate # Windows
# source venv/bin/activate # Mac/Linux

# 4■■ Install dependencies
pip install -r requirements.txt
```

```
# 5■■ Run demo (mock mode - no Azure required)
python demo.py
```

■ **Mock Mode:** All accelerators work without Azure services using mock data for offline development. No API keys required to get started!

■ Hackathon Impact

■ For Citizens

- ■ **Faster answers:** Get information about government services instantly
- ■ **Accessible:** Multi-language support, WCAG 2.1 AA compliant
- ■ **Transparent:** See sources for all information provided

■ For Agency Staff

- ■ **Reduced workload:** AI handles routine inquiries, staff focus on complex cases
- ■■ **Faster processing:** Documents processed in minutes, not hours
- ■ **Better coordination:** Cross-agency visibility and emergency planning

■■ For Government

- ■ **Compliance:** Built-in LOADinG Act and RAISE Act compliance
- ■ **Scalability:** Handles high volumes during crises
- ■ **Accountability:** Complete audit trails for all AI decisions

■ Additional Resources

- • ■ Quick Start Guide: docs/QUICKSTART.md
- • ■ Collaboration Guide: COLLABORATION.md
- • ■ Contributing Guidelines: CONTRIBUTING.md
- • ■ Feature Specifications: specs/
- • ■ Evaluation Framework: evaluation/
- • ■ Azure AI Foundry Documentation: docs.microsoft.com/azure/ai-foundry
- • ■ Semantic Kernel Documentation: docs.microsoft.com/semantic-kernel

■■ Shaping the Future of Responsible AI in New York State ■