



Hackathon Project Presentation

Service-desk Autopilot AI

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The Problem:

Enterprise service desks are drowning in repetitive tickets

- 60-80% of tickets are simple and repetitive
- Password resets
- License lookups
- HR questions
- Basic troubleshooting

The consequences:

- Long wait times
- Burnout for support teams
- High operational cost
- Bad employee experience

Humans are forced to solve trivial problems

The screenshot shows a user interface for the Service Desk Autopilot. At the top, there's a header with a robot icon, the text "Service Desk Autopilot", and "AI-Powered Multi-Agent Service Desk". Below the header, a "Chat" section is displayed. It shows a "User ID: jv-123" field and a status indicator "Connected". A message from the AI says "Welcome! Ask me anything about:" followed by a list of topics: "Password resets", "Account status checks", "PTO balance inquiries", and "HR policy questions". Below this, a text input field contains the question "How many PTO days do I have?", and a blue "Send" button is to its right. At the bottom, there's an "Agent Activity Log" section with a "Clear" button.

Solution Demonstration

A Multi-Agent Autopilot that collaborates with humans, not replaces them.

- Understands user requests
- Retrieves relevant knowledge
- Executes safe automations (“Runbooks”)
- Elevates edge cases to humans

Agents cooperate the way support teams do.

Each agent has a role, limits, and accountability.

Agent Activity Log

Clear

◆ Triage

```
{  
    "user_id": "jv-123",  
    "raw_message": "How many PTO days do I have?",  
    "intent": "pto_balance",  
    "domain": "hr",  
    "confidence": 0.98,  
    "urgency": "normal"  
}
```

◆ Enrichment

```
{  
    "user": {  
        "id": "jv-123",  
        "name": "Test User",  
        "department": "Engineering",  
        "location": "US",  
        "role": "Employee"  
    },  
    "intent": {  
        "user_id": "jv-123",  
        "raw_message": "How many PTO days do I have?",  
        "intent": "pto_balance",  
        "domain": "hr",  
        "confidence": 0.98,  
        "urgency": "normal"  
    }  
}
```

Agent Activity Log

Clear

◆ Planning

```
{  
    "actions": [  
        {  
            "runbook_id": "lookup_pto_balance",  
            "inputs": {  
                "user_id": "jv-123"  
            }  
        }  
    ],  
    "requires_human_approval": false  
}
```

◆ Safety

```
{  
    "block": false,  
    "reason": "All actions allowed by policy"  
}
```

◆ Runbook Execution

```
[  
    {  
        "status": "success",  
        "details": "Runbook completed successfully."  
    }  
]
```

Architecture Overview (Multi-Agent System)

Core Agents

- **Intake Agent** – Understands requests & extracts intent.
- **Context Builder Agent** – Gathers missing details from user & systems
- **Knowledge Retrieval Agent** – Pulls relevant docs/FAQ/service data
- **Policy Agent** – Safety enforcement & compliance
- **Runbook Executor** – Automates validated steps
- **Execution Agent** – Hands off to human with structured context

Guardrails

- RBAC (role-based access)
- Logging
- Conversation audits
- Human override at any time

Key Features and Benefits

AI Automation

Streamlines processes, reducing manual effort and increasing efficiency.

Quick Response

Enhances customer satisfaction with immediate assistance and support.

Integration Capabilities

Seamlessly connects with existing systems for improved workflows.

Contact Information

Let's Connect and Collaborate

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<https://github.com/J-Varela/service-desk-autopilot>