



Hackathon Project Presentation

# Service-desk Autopilot AI

Presented by Jonathan Varela

# 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



# Service Desk Autopilot

AI-Powered Multi-Agent Service Desk

Chat

Connected

User ID:

👋 Welcome! Ask me anything about:

- Password resets
- Account status checks
- PTO balance inquiries
- HR policy questions

Send

Agent Activity Log

Clear

# 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,
```

## 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",
```

# 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**

## Phone

845-745-2995

## Email

[jvrela93@gmail.com](mailto:jvrela93@gmail.com)

## Website

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