

# ■ V-Mart Personal AI Agent

[[Python Application](#)

[CI](#)](<https://github.com/ds25041974/V-Mart-Personal-AI-Agent/actions/workflows/python-app.yml>)

[[Python Version](#)](<https://www.python.org/downloads/>)

[[License](#)](LICENSE)

[[Platform](#)](<https://github.com/ds25041974/V-Mart-Personal-AI-Agent>)

Inspired by: LA

A comprehensive personal AI agent powered by Google's Gemini AI, featuring document search, Gmail/Drive integration, and multi-platform support.

## ■ Documentation

### ■ HIGH PRIORITY - START HERE:

- ■ [ARCHITECTURE.md](#) - Complete system architecture with flowcharts and objectives
- ■ [CHATBOT INTERFACE GUIDE.md](#) - Detailed guide to all tabs and features
- ■ [SERVICE 24x7 SETUP.md](#) - 24x7 auto-start service configuration
- [SETUP GUIDE.md](#) - Complete setup instructions for Windows, macOS, and Linux
- [USER GUIDE.md](#) - Comprehensive usage guide

### Additional Resources:

- [GOOGLE OAUTH SETUP.md](#) - Google OAuth configuration
- [API REFERENCE.md](#) - API documentation for developers
- [QUICK SETUP.md](#) - Quick start guide

## ■ Features

## Core Capabilities

- **Intelligent Chat:** Context-aware conversations with Gemini 2.0 Flash
- **Document Search:** Scan and search local files (PDF, Word, Excel, PowerPoint, text files)
- **Data Analysis:** Advanced analysis for financial, sales, and inventory data
- **Decision Support:** AI-powered recommendations with pros/cons analysis
- **Email Integration:** Read emails, send automated messages, and schedule bulk emails
- **Google Workspace Integration:** Access Google Drive, Sheets, Docs, and Slides
- **GitHub Integration:** Manage repositories, read files, and create issues
- **Task Scheduler:** Automate recurring tasks and emails
- **Reasoning Engine:** Step-by-step analysis for complex problems

## Security & Authentication

- **Google OAuth:** Secure authentication
- **Demo Mode:** Quick access without OAuth setup
- **Session Management:** Secure user sessions
- **Push Protection:** GitHub secret scanning enabled

## Multi-Platform Support

- ✓ Windows 10+
- ✓ macOS 10.15+
- ✓ Linux (Ubuntu/Debian/Fedora/Arch)

## ■ Prerequisites

- Python 3.8 or higher
- Google Cloud account (optional, for OAuth)
- Gemini API key (free tier available)
- Gemini API key
- GitHub personal access token (optional, for GitHub features)

## ■ Quick Start

### Option 1: Run as 24x7 Service (Recommended for macOS)

**Auto-start on boot, restart on crash, always available:**

```
# Navigate to project directory cd "/Users/dineshsrivastava/Ai Chatbot for Gemini LLM/V-Mart Personal AI Agent" # Install and start the service  
./install_service.sh # Check service status ./check_service.sh # Access the application open http://localhost:5000
```

**Benefits:**

- ✓ Starts automatically on system boot
- ✓ Restarts automatically if it crashes
- ✓ Waits for network before starting
- ✓ Runs 24x7 without manual intervention
- ✓ Complete logging and monitoring

■ Full Documentation: [SERVICE 24x7 SETUP.md](#)

### Option 2: Manual Start

#### 1. Clone the Repository

```
git clone https://github.com/ds25041974/dinesh-assistant-deployment.git cd  
"V-Mart Personal AI Agent"
```

#### 2. Install Dependencies

```
pip install -r requirements.txt
```

#### 3. Configure Environment Variables

Copy the example environment file and fill in your credentials:

```
cp .env.example .env
```

Edit `.env` with your actual credentials:

```
GOOGLE_CLIENT_ID=your_google_client_id
GOOGLE_CLIENT_SECRET=your_google_client_secret
GEMINI_API_KEY=your_gemini_api_key GITHUB_TOKEN=your_github_token
SECRET_KEY=your_random_secret_key
```

## 4. Set Up Google OAuth

1. Go to [Google Cloud Console](#)
2. Create a new project or select an existing one
3. Enable the following APIs:
  - Google Drive API
  - Gmail API
  - Google Sheets API
  - Google Docs API
  - Google Slides API
4. Create OAuth 2.0 credentials
5. Add authorized redirect URLs:
  - `http://localhost:5000/authorize`
  - `http://127.0.0.1:5000/authorize`
6. Copy the Client ID and Client Secret to your `.env` file

## 5. Get Gemini API Key

1. Visit [Google AI Studio](#)
2. Create an API key
3. Copy it to your `.env` file

## 6. Run the Application

```
python main.py
```

Visit <http://localhost:5000> in your browser.

## ■ Project Structure

```
V-Mart Personal AI Agent/
  src/
    agent/ # Core AI agent logic
    gemini_agent.py # Gemini LLM integration
    auth/ # Authentication handling
    google_auth.py # Google OAuth
    connectors/ # External service connectors
    google_drive.py
    gmail_connector.py
    google_sheets_connector.py
    google_docs_connector.py
    google_slides_connector.py
    github_connector.py
    local_files.py
    scheduler/ # Task automation
    task_scheduler.py
    auto_emailer.py
    web/ # Flask web application
    app.py # Main Flask app
    templates/ # HTML templates
    static/ # CSS and assets
    tests/ # Unit tests
    docs/ # Documentation
    scripts/ # Utility scripts
    main.py # Entry point
    requirements.txt # Dependencies
    README.md # This file
```

## ■ Usage Guide

### Chat Interface

The chat interface provides context-aware conversations with the AI agent. Simply type your question and get intelligent responses.

#### Example queries:

- "Analyze our Q4 sales performance"
- "What factors should I consider for inventory planning?"
- "Summarize this document"

### Data Analysis

Upload or paste data in various formats (CSV, JSON, text) and select the analysis type:

- **General:** Overall insights and patterns
- **Financial:** Profitability, trends, financial health
- **Sales:** Sales patterns, trends, forecasts
- **Inventory:** Stock levels, turnover analysis

## File Management

- Browse local files
- Search files by name
- Read file contents
- Analyze documents with AI

## Decision Support

Get AI-powered recommendations for business decisions:

1. Enter the decision title
2. Provide context and background
3. List possible options
4. Get detailed pros/cons analysis with recommendations

## ■ Advanced Configuration

### Auto-Start on System Boot

#### ***macOS (LaunchAgent)***

Create a plist file at `~/Library/LaunchAgents/com.vmart.agent.plist`:

```
<?xml version="1.0" encoding="UTF-8"?> <!DOCTYPE plist PUBLIC "-//Apple//DTD  
PLIST 1.0//EN" "http://www.apple.com/DTDs/PropertyList-1.0.dtd"> <plist  
version="1.0"> <dict> <key>Label</key> <string>com.vmart.agent</string>  
<key>ProgramArguments</key> <array> <string>/usr/bin/python3</string>  
<string>/path/to/V-Mart Personal AI Agent/main.py</string> </array>  
<key>RunAtLoad</key> <true/> <key>KeepAlive</key> <true/> </dict> </plist>
```

Load it with:

```
launchctl load ~/Library/LaunchAgents/com.vmart.agent.plist
```

#### ***Linux (systemd)***

Create `/etc/systemd/system/vmart-agent.service`:

```
[Unit] Description=V-Mart Personal AI Agent After=network.target [Service]
Type=simple User=yourusername WorkingDirectory=/path/to/V-Mart Personal AI
Agent ExecStart=/usr/bin/python3 /path/to/V-Mart Personal AI Agent/main.py
Restart=always RestartSec=10 [Install] WantedBy=multi-user.target
```

Enable and start:

```
sudo systemctl enable vmart-agent sudo systemctl start vmart-agent
```

### **Windows (Task Scheduler)**

Use the Windows Task Scheduler to run `main.py` on system startup.

## **■ Testing**

Run the test suite:

```
python -m pytest tests/
```

## **■ Contributing**

This is a private project for V-Mart Retail. For feature requests or issues, contact the development team.

## **■ License**

Proprietary - V-Mart Retail Ltd.

## **■ Support**

For support, contact:

- Email: support@vmartretail.com

- Internal Slack: #ai-agent-support

## ■ Updates

The agent automatically stays updated with the latest Gemini AI capabilities. Regular dependency updates are recommended:

```
pip install --upgrade -r requirements.txt
```

## ■■ Important Notes

1. **Security:** Never commit your `.env` file to version control
2. **API Limits:** Be mindful of Google API quotas
3. **Costs:** Gemini API usage may incur costs - monitor your usage
4. **Data Privacy:** Ensure sensitive data is handled according to company policies

## ■ Acknowledgments

- Google Gemini AI team for the powerful LLM
- Google Cloud team for excellent APIs
- V-Mart IT team for support and testing