

# Project Documentation

## 1. Project Overview

- **Name:** Customer Context Summarization Snap-In
- **Objective:** Develop a Snap-In that provides support agents with a comprehensive overview of a customer's history and relevant context when a new conversation or ticket is initiated. This enables more personalised and efficient support.
- **Problem Statement:**  
Support agents lack immediate access to a customer's complete context, leading to slower responses and suboptimal customer experiences. This Snap-In aims to automatically collect and summarise customer data from various sources, presenting actionable insights at the start of each interaction.
- **Key Features:**
  - Aggregate data from multiple internal and external sources.
  - Summarize the customer's history and current status concisely.
  - Provide actionable recommendations to improve support quality.
  - Automatically activate on ticket or conversation creation.
  - Allow customizable data source configurations.

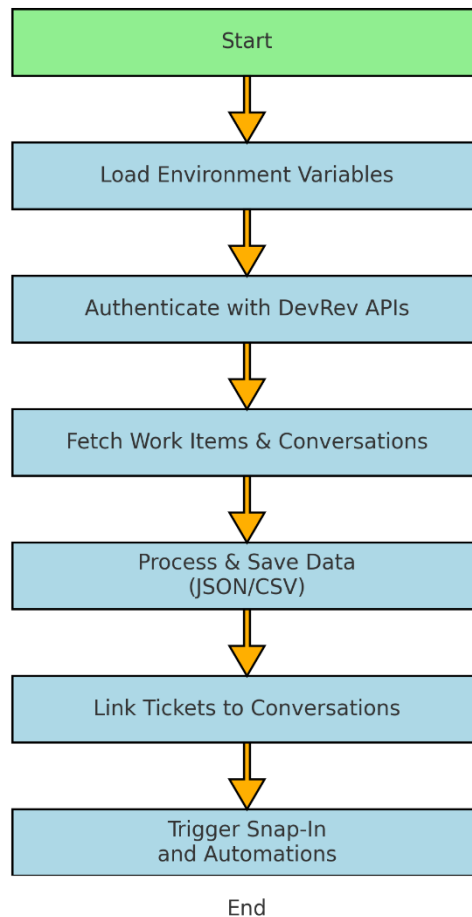
## 2. Architecture

- **Components:**
  1. **Trigger Mechanism:**
    - Activates upon the creation of a new conversation or ticket using DevRev's webhook event (work\_created).
  2. **Data Aggregation:**
    - Collects data from internal DevRev objects (e.g., tickets, conversations, and product usage) and other configured sources.
  3. **Context Summarization:**
    - Uses algorithms to prioritize and synthesize the most relevant data into a concise summary.
  4. **Actionable Insights Generation:**
    - Provides recommendations or highlights specific issues based on historical data.
  5. **Customization Module:**
    - Allows agents to configure included data sources.

## 6. Error Handling:

- Ensures robust performance and scalability under high request loads.
- **Flowchart:** A detailed flowchart is shown below.

Flowchart for Snap-In Creation and Data Processing



## 3. Core Features

- **Data Aggregation:**
  - Fetch and aggregate customer data from multiple DevRev objects.
- **Context Summarization:**
  - Use intelligent filtering to prioritize relevant data for concise summaries.
- **Actionable Insights:**
  - Provide recommendations based on historical and current data.
- **Customization:**
  - Enable agents to configure data sources (internal and external).

- **Real-Time Integration:**
  - Automatically trigger on the creation of tickets or conversations.

#### 4. Setup Instructions

- **Prerequisites:**
  1. TypeScript environment installed.
  2. Required libraries (via npm or yarn).
  3. DevRev account and service account token for API access.
- **Steps to Set Up:**
  1. **Clone the repository:**

```
git clone <repository-link>
cd <repository-folder>
```
  2. **Install dependencies:**

```
npm install
```
  3. **Configure the Snap-In by creating a .env file:**

```
PERSONAL_ACCESS_TOKEN=<your-access-token>
```
  4. **Deploy the Snap-In:**

```
npm install
npm run build
npm run package
```

#### 5. Usage Guidelines

- **Fetch Work Items:**
  - Run WORKLIST.py to fetch and save data in JSON.
  - Process and save structured data by running SUMMARY.py.
- **Link Tickets and Conversations:**
  - Execute the LINK.py script to generate linked data.
- **Automate Snap-In:**
  - Deploy Snap-In via the provided Node.js scripts.
  - Trigger events (work\_created) to automate comments.

## 6. File Details

- **WORKLIST.py:** Fetches and stores work item data.
- **LINK.py:** Links tickets to conversations.
- **SUMMARY.py:** Extracts and saves work item summaries.
- **SNAP-IN SCRIPTS:** Automates timeline comments.
- **MANIFEST FILE:** Defines Snap-In inputs, functions, and triggers.

## 7. Troubleshooting

- **Authentication Issues:**
  - Verify the .env file contains a valid service account token.
- **Data Fetching Failures:**
  - Check API endpoint availability and ensure correct configurations in the Snap-In.
- **Scalability Challenges:**
  - Optimize algorithms for high-volume data processing.

## 8. Future Enhancements

- Integrate AI-based summarization for improved context generation.
- Extend to external platforms for deeper insights.
- Provide a graphical dashboard for visualizing summaries and insights.