



GMAP: GenAI Support Assist

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About Me

- Born & raised in Austin, TX
- Computer Science/Economics at the University of Virginia (B/A)
- Software Engineering Intern on Global Marketing Authentication Portals (GMAP) Team
- Bigger Formula 1 Fan than Keshav



Support Assist: Overview

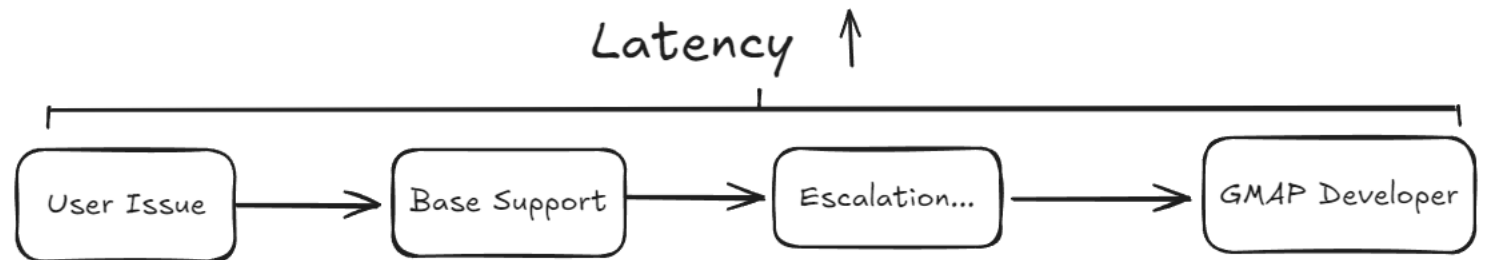
GMAP Support

Overview

- GMAP Support encompasses:
 - Portal login
 - Card validation
 - Account registration
- Weekly rotating “on-call” developers
- Issue resolution **highly variable**
- Support **essential**
 - Software health
 - Customer needs
- ...but **unproductive**

Objective

- **Minimize** “on-call” developer time
- **Minimize** time-to-resolution (latency)
- **Maximize** *correctness*



GMAP Support Resolution Pipeline

Support Assist: Methodology

How do “On-Call” Developers Resolve User Scenarios?

1. Data

- Issue Context
 - Email Chain
- User identification(s)
- Real-time production logs
 - Splunk

2. Debug

- **Interpret** escalation process
- **Consolidate** production logs
- **Manually parse** relevant data

3. Resolve

- Forward (likely) solution to support
 - Back-and-forth...

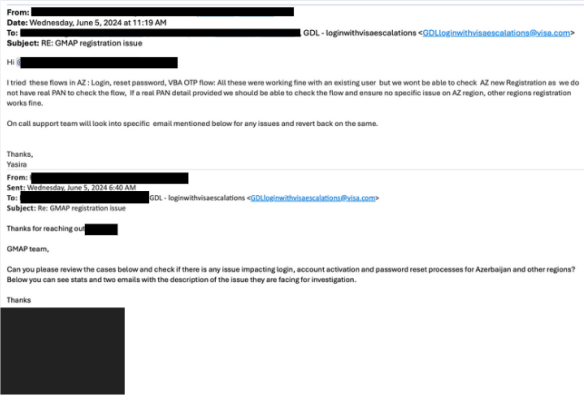
Pain Points

- **Highly** subjective process
 - Developer competency
 - Varying support context
- **Unpredictable** complexity
 - ~15-45 min per issue
- Support **on-demand**
 - Development planning hindered

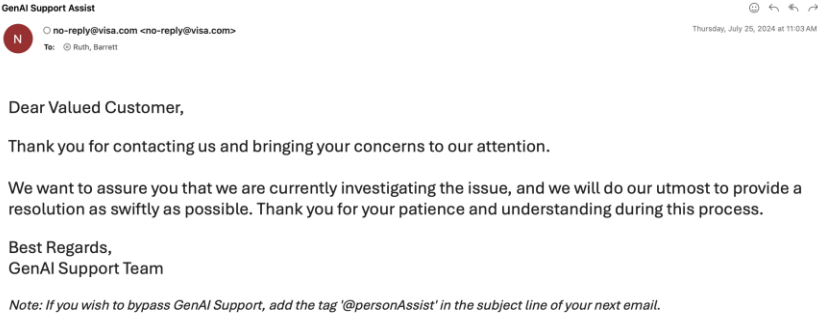
Support Assist: Pilot Workflow

2. Support Assist Workflow

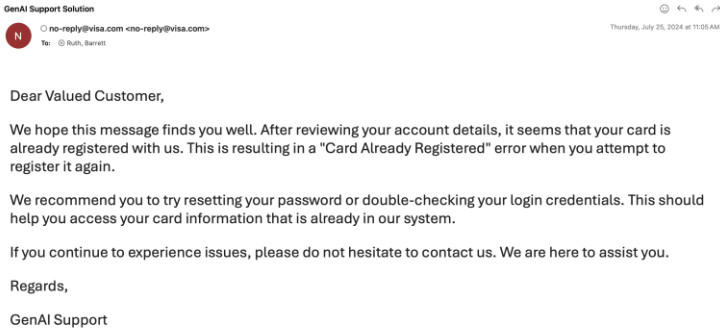
1. Escalated Issue

The interface is titled "VISA GenAI Customer Support Assist" with a "User Scenario Training" link. It contains several input fields: "Requester Email" (bruth@visa.com), "Splunk Username" (bruth), "Splunk Password" (a masked field), and "Email Data" (a large text area). Below these is an "Upload File" section with a "Choose File" button and a file name "card-already-registered.txt". A "Submit" button is at the bottom.

3a. Automated User Response



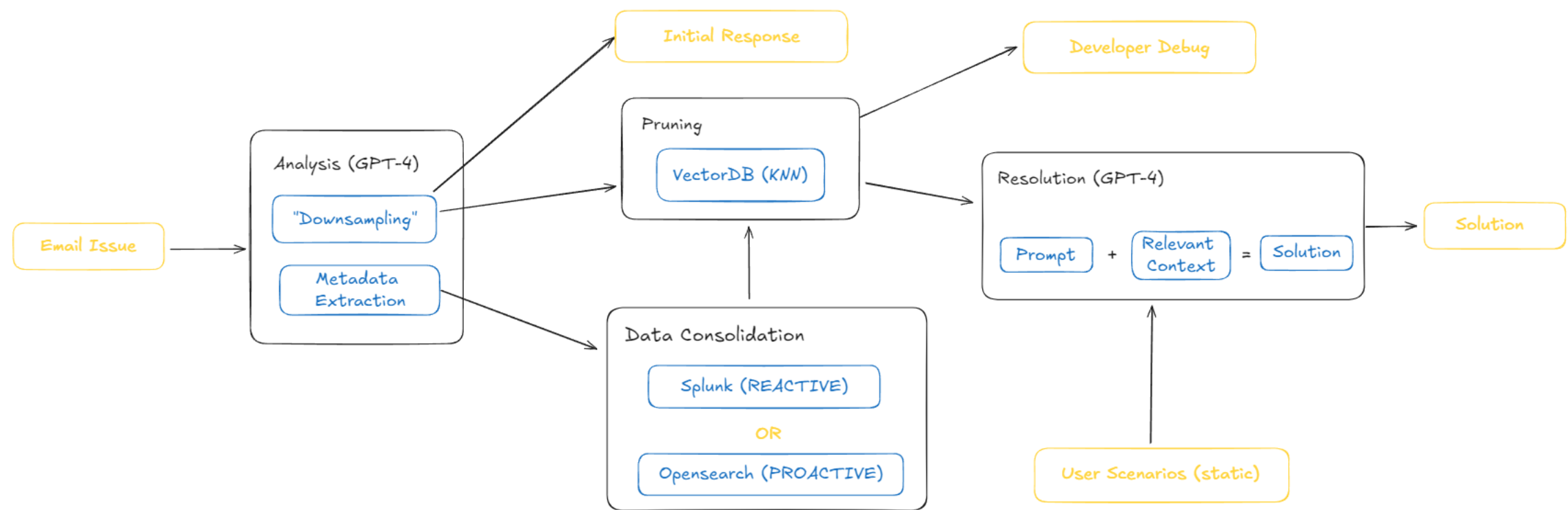
3b. GenAI Solution



3c. Developer Debug



System Design: GenAI as an “On-Call” Developer



Support Assist: Results

GenAI Support Assist: Results

	Time-to-Resolution (m)
GMAP Developer	~15-45
GenAI (proactive)	~2
GenAI (reactive)	~10

1. Efficiency at a cost

- User Scenario Training
- Developer Debug

2. Overhead Reduction

- Data consolidation

3. 1st of Many

- Promising POC – issue resolution “unsolved”

Support Assist: Takeaways & Next Endeavors

Next Endeavors

- “Genai Support Assist V1”
 - Sophisticated ML Pipeline
 - Issue *prediction*/bug *detection*
 - *Fully* automated issue resolution – (nearly) no on-call!
 - Expanding data sources

Key Learnings

- SWE is more communication than development
 - GMAP team
- “Covering my tracks” – from onboarding to Support Assist Wiki
 - Would not be here today without docs from current devs...
- Writing “production-grade” software
 - Unit/Integration testing & code readability
- Tech: VectorDB, CloudView, Embeddings, API Design



Shoutout to Michael and Aswin for
always lending a hand!

Visa Leadership Principles

Execute With Excellence



- Creating flexible, long-term strategies/systems
 - Accommodating unpredictable slowdowns
 - “Fall to height of your systems”

Lead Courageously



- “Owning” blockers
- Cross-team communication
 - Splunk, Cloudview, Chat-GPT

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