

# Agent Journey Replay

**Team members:** Del Husband, Brian Vo, Alex Nguyen, Parker Gonzaga | **Faculty advisor:** Rachita Sowle, Ph.D. | **Sponsor:** Capital One | **Mentors:** Mahesh Nair, Derrick Murry, and Lily Roark

## Problem Overview

- Capital One uses a proprietary customer servicing platform called **Empath**. Capital One agents occasionally encounter technical issues when using the platform.
- These issues are **time consuming** to find, and require developers to manually track down the source of the issue.
- This project focuses on developing an application that **replays an agent's "journey"** through the system using the agent's clickstream data.
- This will help developers **identify** and **recreate** issues more quickly, reducing development time and time spent isolating bugs.

## Additional Benefits

- Improved Developer Efficiency:** By providing developers with a clear, visual replay of agent interactions, the tool reduces the time spent on manual troubleshooting.
- Enhanced Customer Experience:** With quicker resolution of technical issues, agents can assist customers more effectively.

## Problem Solution

- Our solution uses **Google Analytics** to record each interaction an agent has with the platform, **capturing clickstream data** that allows us to replay an agent's journey through the system. This can later be **integrated** with Capital One's existing clickstream-gathering tools.
- We developed a **feature that replays an agent's actions** using Playwright, enabling developers to observe the exact steps taken leading up to an issue. This replay feature **visually displays** every click, input, and interaction, making it easier to locate the root cause of technical problems.

### Agent Dashboard - Capital One

Dashboard Customer Search Recent Interactions Support

#### Customer Information

**Name:**  
John Doe

**Customer ID:**  
CUST123456

**Phone Number:**  
(555) 555-1234

**Email:**  
johndoe@email.com

**Address:**  
123 Main St, Anytown, VA 12345

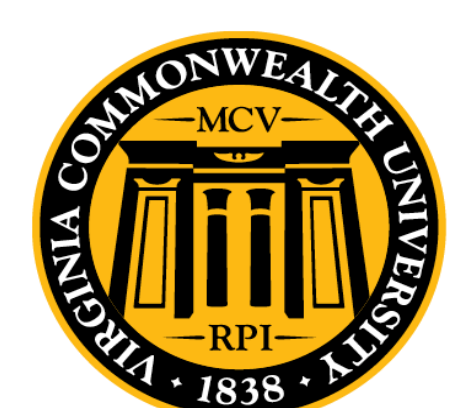
**Account Status:**  
Active

## Future Work

- Data Masking:** Data masking will be implemented via Tweak to prevent sensitive user information from being captured by the agent replay.
- Cloud Storage:** Data will be moved to the cloud to ensure Capital One agents can access and replay session data easier.

## Challenges & Limitations

- Data Volume:** Managing and processing large volumes of clickstream is a key challenge.
- Privacy Concern:** Ensuring the security and privacy of sensitive customer data is critical, especially given Capital One's focus on customer confidentiality.
- Real-Time Accuracy:** Eliminating any delay between the data capture and the replay due to data processing times is important to achieve real-time accurate data.



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**Playwright**



Google Analytics

**tweak**