

MICHIGAN STATE

UNIVERSITY

Beta Presentation

DeepAssociation™ Similarity Tool

The Capstone Experience

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*From Students...
...to Professionals*

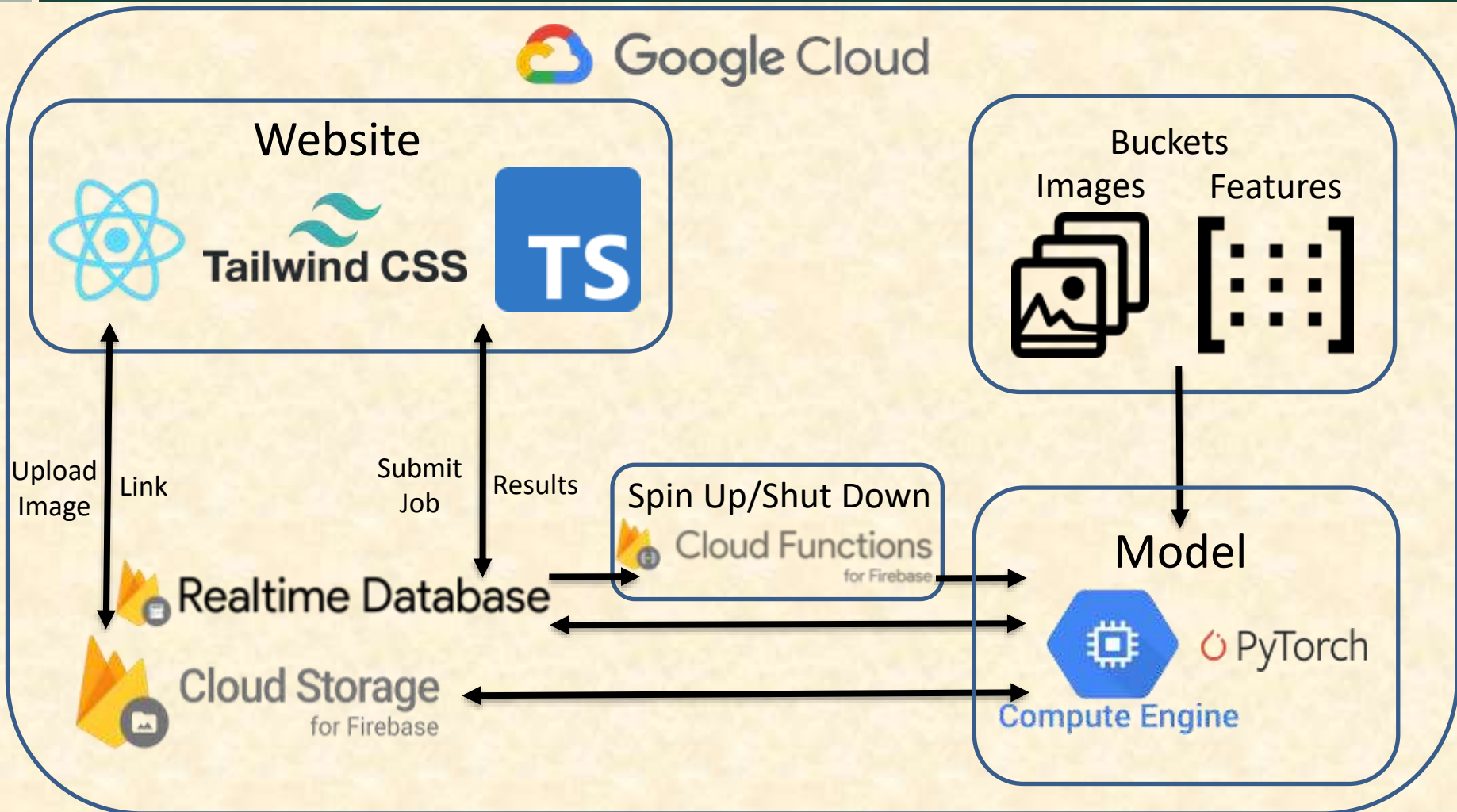
Project Overview



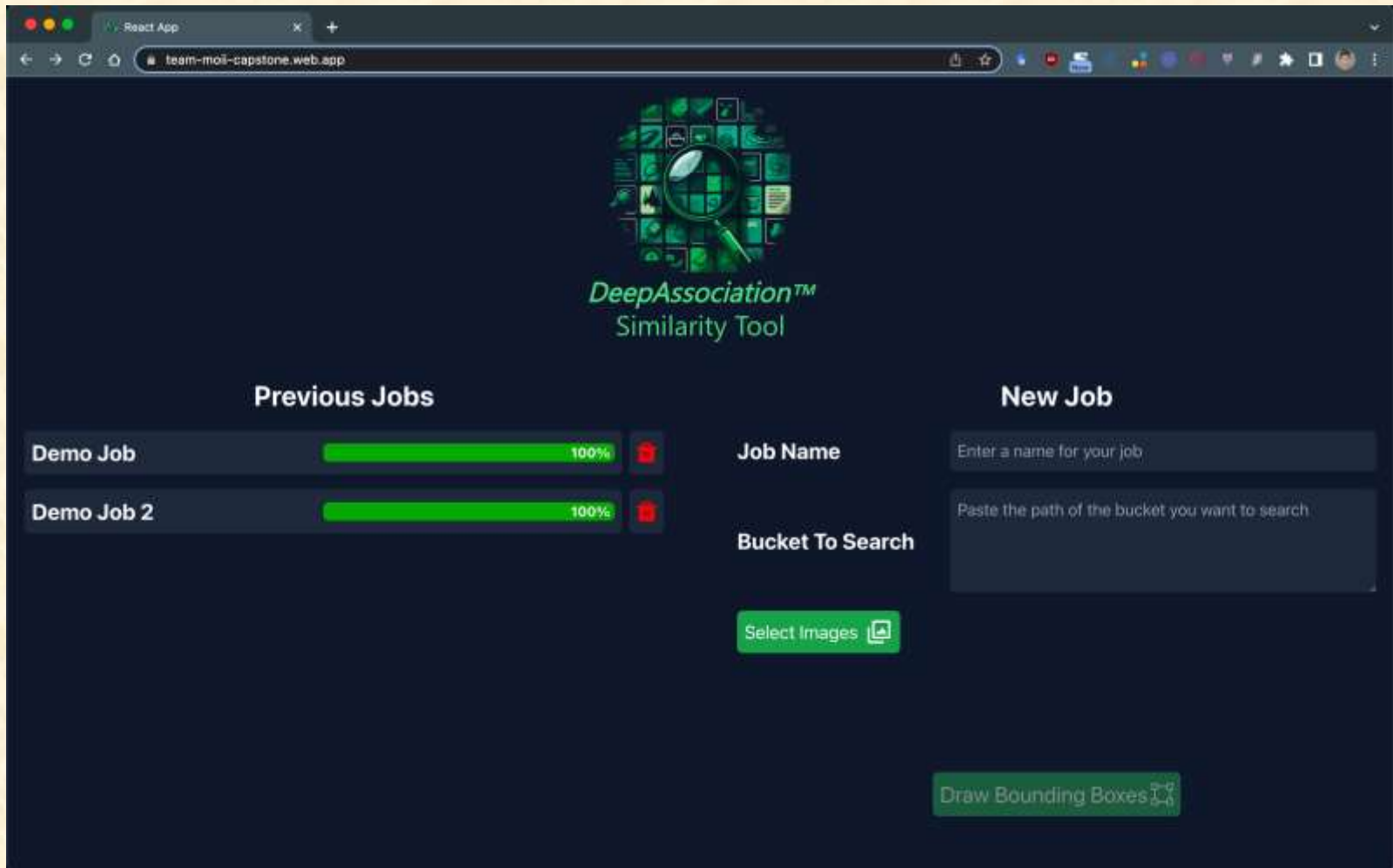
- Insights-as-a-Service(IaaS) company
- Provides analytics through cctv footage
- Collecting training data is time-consuming
- Automatically search footage for similar images



System Architecture



Start Job



The screenshot shows a web browser window displaying the 'DeepAssociation™ Similarity Tool' interface. The browser's address bar shows 'team-moi-capstone.web.app'. The main content area features a central logo with a magnifying glass over a grid of icons, with the text 'DeepAssociation™ Similarity Tool' below it.

The interface is divided into two main sections:

- Previous Jobs:** This section lists two jobs: 'Demo Job' and 'Demo Job 2'. Each job has a green progress bar indicating 100% completion and a red trash icon to its right.
- New Job:** This section contains three input fields and two buttons:
 - Job Name:** A text input field with the placeholder text 'Enter a name for your job'.
 - Bucket To Search:** A larger text input field with the placeholder text 'Paste the path of the bucket you want to search'.
 - Select Images:** A green button with a camera icon.
 - Draw Bounding Boxes:** A green button with a bounding box icon.



Drawing Bounding Boxes

The screenshot shows a web browser window displaying a React application. The browser's address bar shows the URL `team-moii-capstone.web.app/boundingBox`. The main content area features a video frame from a security camera, timestamped `12-16-2022 06:03:44 PM`. The video shows two people in a hallway; one person in a red jacket and a grey cap is highlighted with a red bounding box. The text `1st_Floor_Gate` is overlaid on the bottom left of the video. Below the video, there are two small thumbnail images of the same scene, each with a red bounding box around the person in the red jacket. To the right of these thumbnails are two green buttons: `Go` and `Restart`. At the bottom left of the interface, there are two sets of controls for the search parameters:

Min Similarity Score	50	Min Similarity Score	50
Number of Results	5	Number of Results	5



Loading Results

The screenshot displays a web browser window with a React App. The URL is `team-moi-cagstone.web.app/results/-NS7N2ivEm8aKhsrhTMf`. The interface is split into two main sections: **Queries** and **Results**.

Queries Section:

- Top panel: `1st_Floor_Gate`, `Min Similarity Score: 15.0`, `Num Results Requested: 20`. The video frame shows a person in a red jacket and a person in a white coat. A red bounding box highlights the person in the red jacket. The timestamp is `12-10-2022 06:03:44 PM`.
- Bottom panel: `1st_Floor_Gate`, `Min Similarity Score: 50.0`, `Num Results Requested: 20`. The video frame shows the same scene as the top panel. A red bounding box highlights the person in the red jacket. The timestamp is `12-10-2022 06:04:10 PM`.

Results Section:

- Top panel: `1st_Floor_Gate`, `7. Similarity Score: 57.2`. The video frame shows a person in a blue shirt walking away. A red bounding box highlights the person. The timestamp is `01-02-2023 09:49:50 PM`.
- Middle panel: `1st_Floor_Gate`, `8. Similarity Score: 56.3`. The video frame shows the same person in the blue shirt. A red bounding box highlights the person. The timestamp is `01-02-2023 09:49:50 PM`.
- Bottom panel: `1st_Floor_Gate`, `9. Similarity Score: 56.3`. The video frame shows the same person in the blue shirt. A red bounding box highlights the person. The timestamp is `01-02-2023 09:49:50 PM`.

Navigation and Status:

- At the bottom, there are three green checkmarks in circles, labeled `VM`, `Extract`, and `Score`.



Download Results

The screenshot displays a web application interface for video search. The browser address bar shows the URL: `team-moii-capstone.web.app/results/-NS7N2svEm8aKhsnhTFM`. The interface is divided into two main columns: **Queries** and **Results**.

Queries: This section shows a video frame from a camera labeled "1st_Floor_Gate" with a timestamp of "12-16-2021 06:03:47". A red bounding box highlights a person in the video. Below the frame, it indicates "Min Similarity Score: 50.0" and "Num Results Requested: 20".

Results: This section displays a list of search results. The top result is a video frame from the same camera and timestamp, with a red bounding box around the same person. Below the frame, it shows "1. Similarity Score: 100.0".

At the bottom of the interface, there is a green button labeled "Download Results" with a download icon.



What's left to do?

- Other Tasks
 - Add metadata download
 - Documentation
- Stretch Goals
 - Automate feature extraction
 - Add animations to UI
 - Multiple bounding boxes
 - Names for individual query items



Questions?

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