Lucida

September 4, 2016

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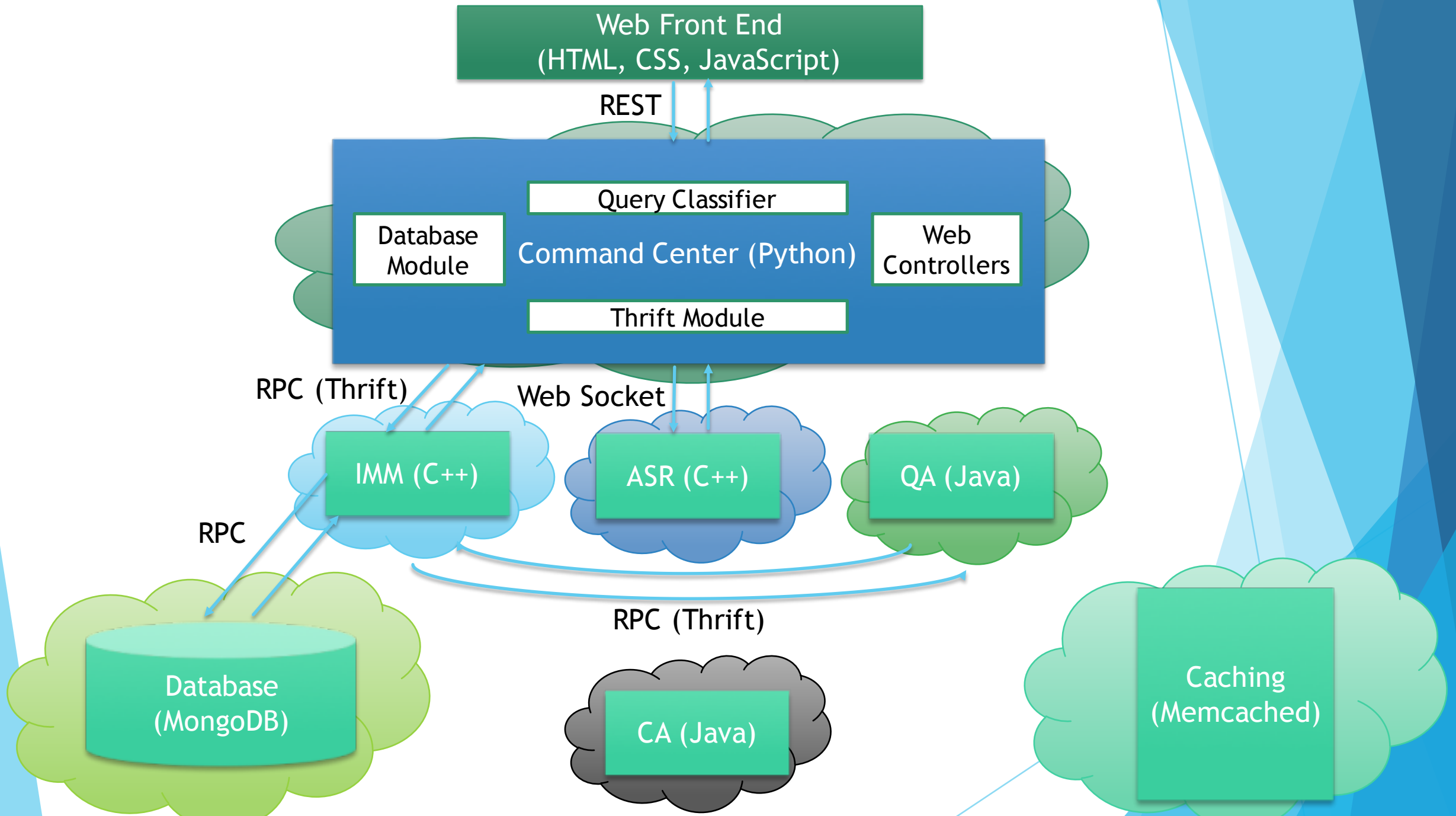
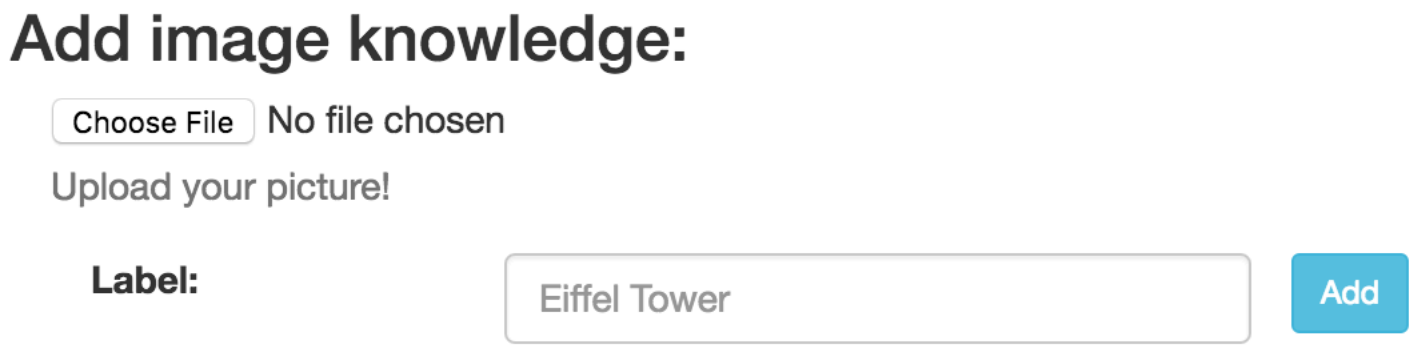
Overview

- Lucida is a speech and vision based intelligent personal assistant developed in Clarity Lab at the University of Michigan. It is a state-of-the-art infrastructures to study emerging intelligent web services in large scale systems.
- Introduction: http://lucida.ai
- Github: https://github.com/claritylab/lucida
- Google Group: https://groups.google.com/forum/#!forum/lucida-users


Web Front End
(HTML, CSS, JavaScript)
REST
Query Classifier
Database Module
Command Center (Python)
Web Controllers
Thrift Module
RPC (Thrift)
Web Socket
IMM (C++)
ASR (C++)
QA (Java)
RPC
RPC (Thrift)
Database (MongoDB)
CA (Java)
Caching (Memcached)

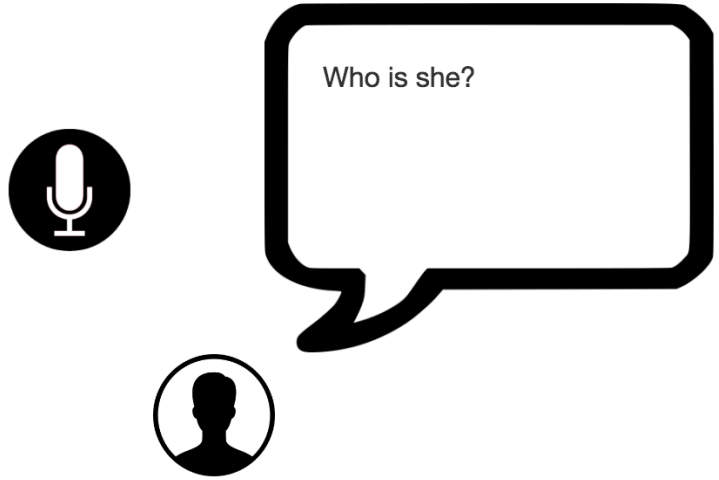
Demo
Image Matching

- 1. Add at least one image under the “Learn” tab.



Demo
Image Matching

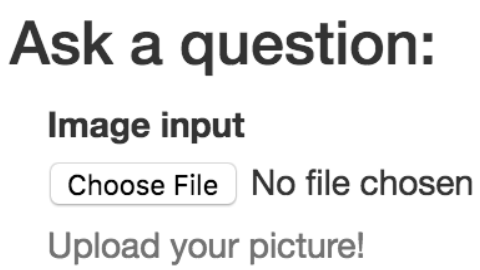
- 2. Navigate to the “Infer” tab. Ask one of the following questions:
- Who is he?
- Who is she?
- Who’s in the image?
- Match this image.
- Which photo in my collection is similar to this?



- This step is optional. You can directly go to step 3.

Demo
Image Matching

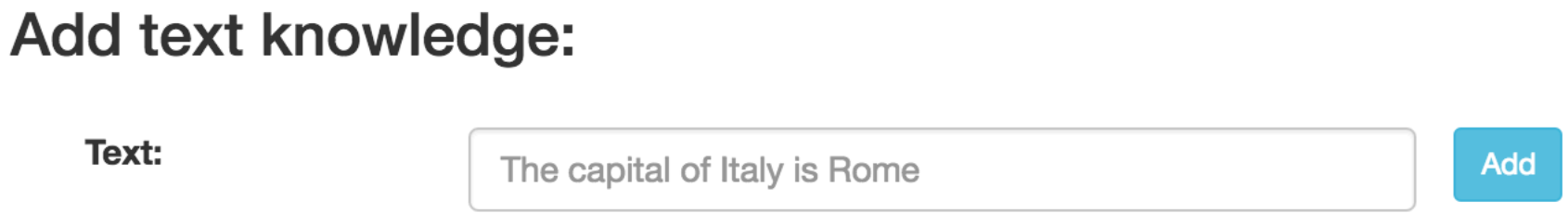
- 3. Upload one image that you want to match.



- 4. Click the “Ask” button.

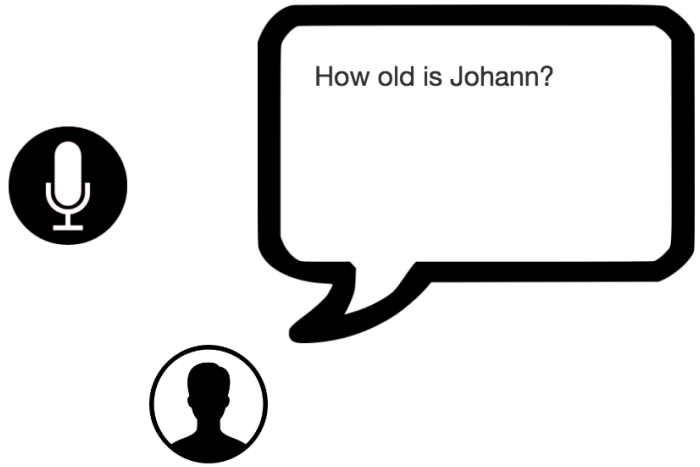
Demo
Question Answering

- 1. Add at least one piece of text under the “Learn” tab.
- For example, “Johann is 25 years old.”



Demo
Question Answering

- 2. Navigate to the “Infer” tab. Ask one question related to the knowledge you added in step 1.
- For example, “How old is Johann?”
- 3. Click the “Ask” button.

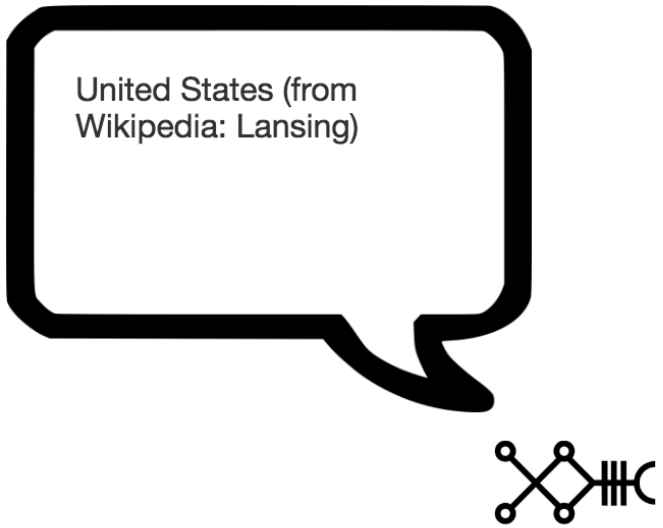


Demo
Question Answering

- 4. Go back to the “Learn” tab. Add a Wikipedia page URL:
- For example, https://en.wikipedia.org/wiki/University_of_Michigan

Demo
Question Answering

- 5. Go back to the “Infer” tab. Ask a question related to the knowledge you added in step 4:
- For example, “Where is the University of Michigan located?”
- 6. Click the “Ask” button.

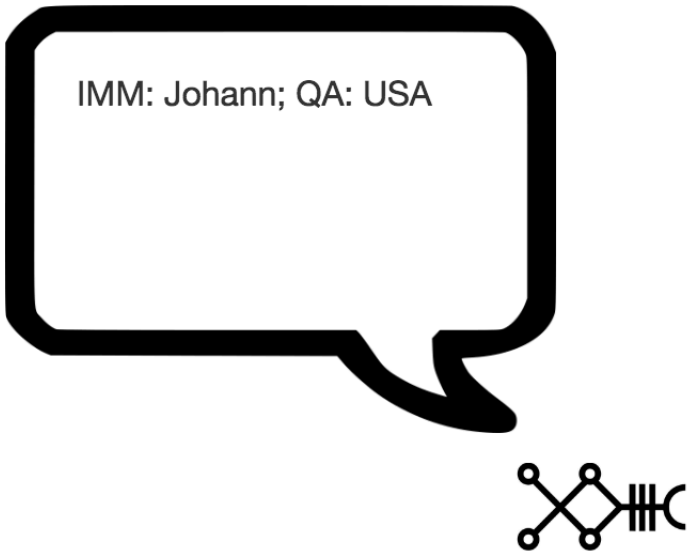


Demo
Question Answering

- 7. Ask one of the following questions:
- `Who is the last emperor of China?`
- `Who discovered the South Pole?`
- `Who invented the telephone?`
- `Who is the Greek mathematician that developed geometry?`
- `When was the Munich agreement made?`
- `When did Mike Tyson win the title?`
- `Where is the River Nile located?`
- 8. Click the “Ask” button.

Demo
Image Matching + Question Answering

- 2. Navigate to the “Infer” tab. Ask the following question and upload the image with “Johann” in it.
- `Where was he born?`
- 3. Click the “Ask” button.

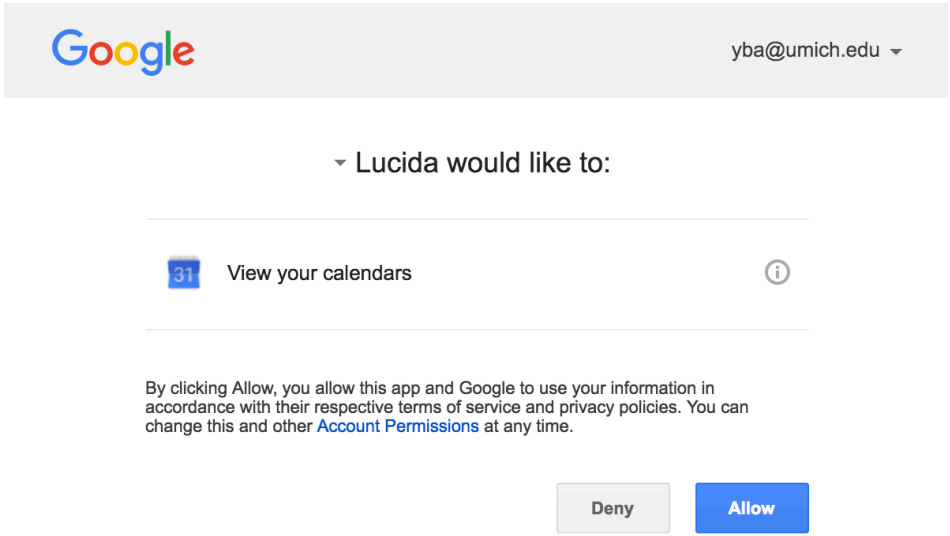


Demo
Calendar

- 0. We assume you have some events on your Google Calendar.
- 1. Navigate to the “Infer” tab and ask one of the following questions:
- `What am I going to do tomorrow?`
- `What is my plan next Monday?`
- `What is on my schedule next Tuesday afternoon?`
- `What did I do last weekend?`
- `What was on my Google Calendar last year?`
- `What was on my schedule last Christmas?`
- `2.` Click the “Ask” button.

Demo
Calendar

- 3. Allow the pop-up window and click “Allow”:



Demo
Digit Recognition

- 1. Navigate to the “Infer” tab and ask one of the following questions:
- `What digit is in the image?`
- `Lucida, what is this number?`
- 2. Upload one of the following JPEG images:

- 3. Click the “Ask” button.

Demo
Face Recognition

- 1. Navigate to the “Infer” tab and ask one of the following questions:
- `Who is this famous star?`
- `Do you know this celebrity?`
- 2. Upload an image of JPEG format with a celebrity in it.
- 3. Click the “Ask” button.

Demo
Image Classification

- 1. Navigate to the “Infer” tab and ask one of the following questions:
- `What is this thing?`
- `What is the animal?`
- 2. Upload one of the following JPEG images:

3. Click the “Ask” button.

Thank you!

- Please leave your feedback on our Github repository or Google group!