Contributing to Social Media Macroscope Project

Introduction

added_eScience_2019_SMM.pptx
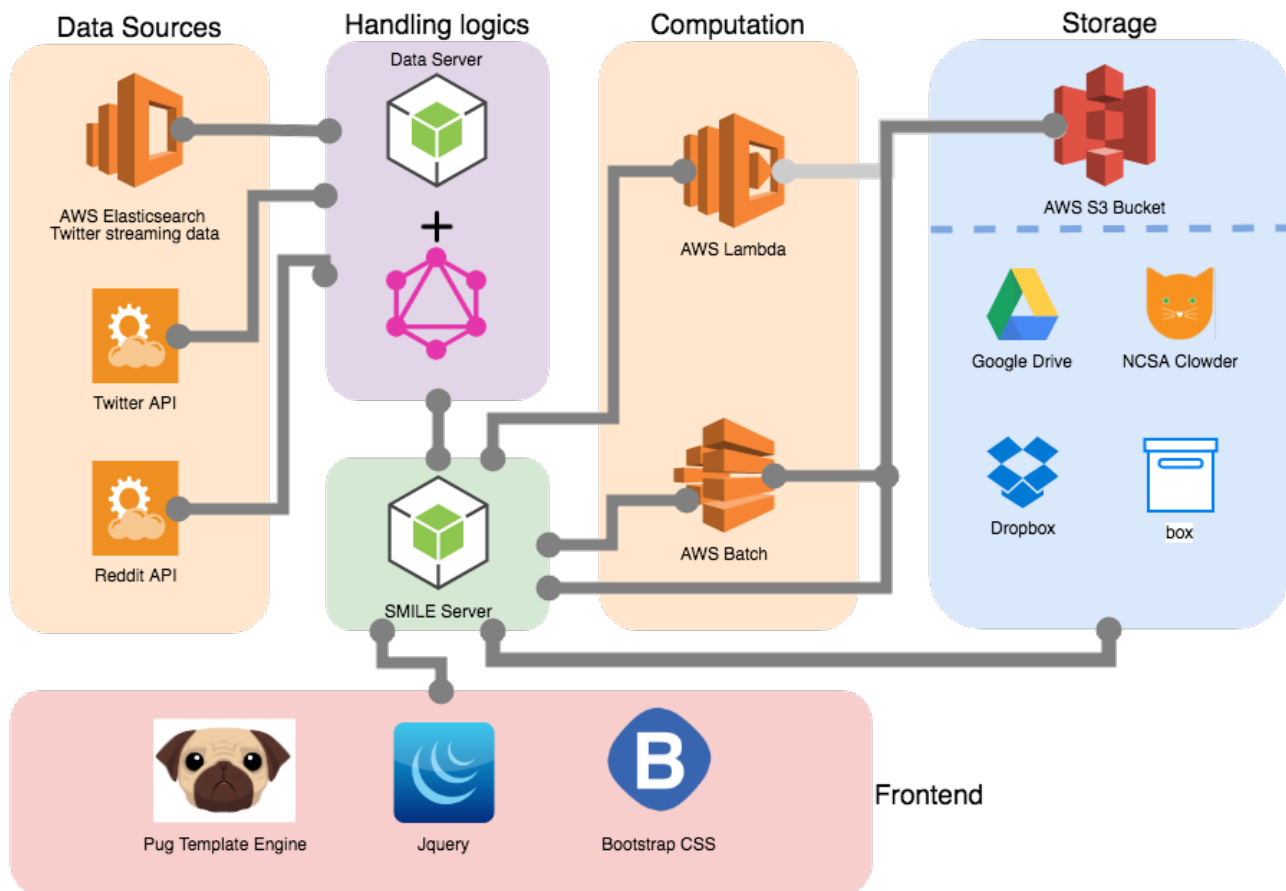
Geting start

- **Register** on https://socialmediamacroscope.org and start trying out the tools
- **Code base:**
  - https://opensource.ncsa.illinois.edu/bitbucket/projects/SMM (for development)
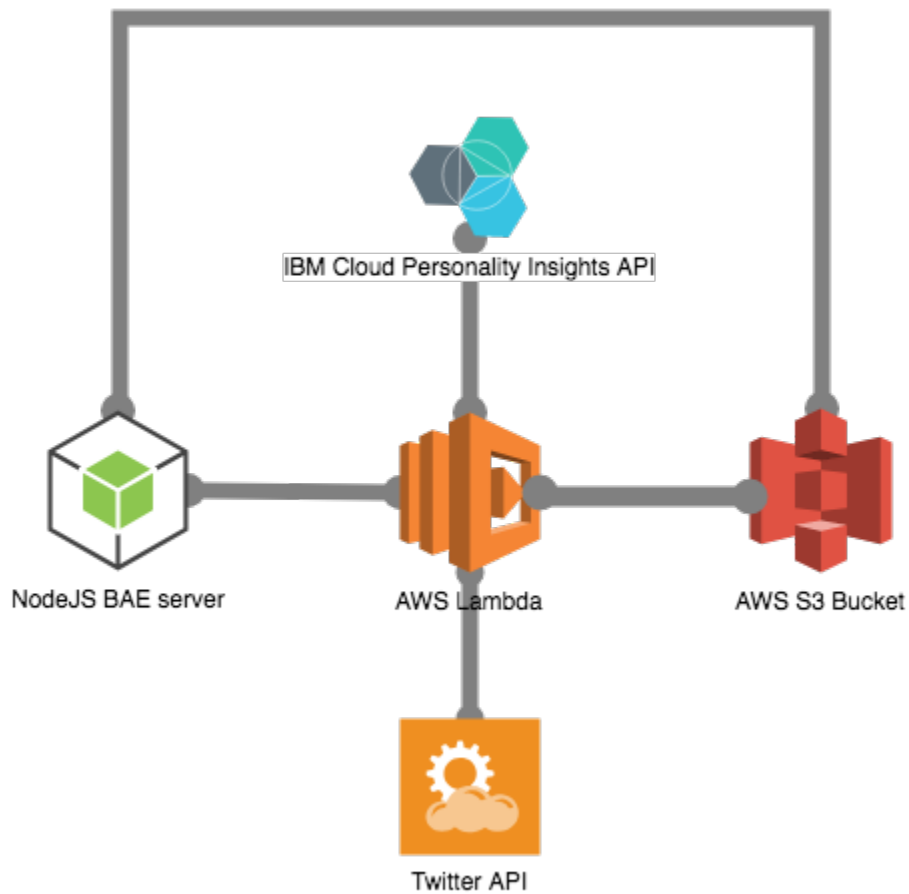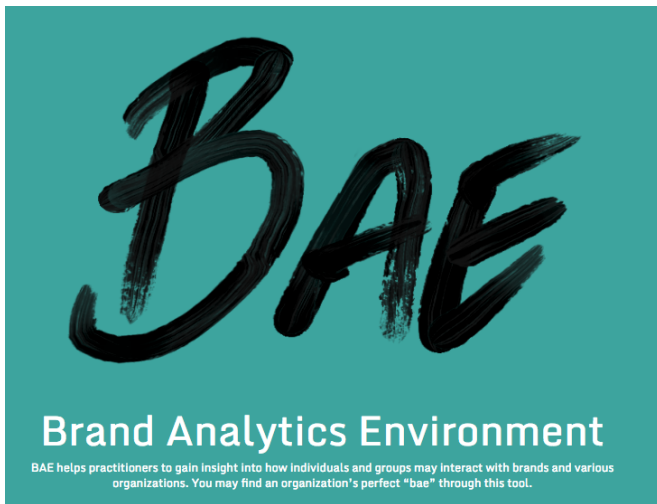 - https://github.com/IllinoisSocialMediaMacroscope (mirrored from bitbucket)

Contributing to existing tools

- SMILE

- **SMILE is a comprehensive social media data collecting and analytics platform.**
- **Defining new social media platform data source**
    - how to authenticate and authorize
    - what's the data structure like
    - what is the platforms policy on data collection and ownership
    - learn GraphQL and define your own schema
- **Adding new analytics metrics**
    - currently we have Sentiment analysis, NLP Preprocessing, Topic modeling, Automated phrase detection, Name Entity Recognition, and Twitter Network analysis
    - you can bring in your own analyses, ideally in Python, but can be any programming languages.
    - Alternatively, in each of the above mentioned analyses, if you have specific algorithms or innovated ways to perform that analysis, you are welcomed to bring in those
    - Useful links:
        - Guidance for writing configuration file in SMILE
        - Template for submitting Python algorithm
        - SMILE endpoints

- BAE

Brand Analytics Environment

BAE helps practitioners to gain insight into how individuals and groups may interact with brands and various organizations. You may find an organization's perfect "bae" through this tool.

IBM Cloud Personality Insights API

NodeJS BAE server

AWS Lambda

AWS S3 Bucket

Twitter API

- PAHO COVID19 dashboards
- **This is the newest project we are working on currently!**

Other aspects that you could contribute to:

- **UI/UX design**
- **Testing and Monitoring**
- **Exploring new computation platforms and resources**
    - Other cloud computing platform capability other than AWS; for example Azure since we have allocation for that
    - Container orchestration - one of the direction we are exploring is to dockerize all the components of the tools, and we plan to scale it up using kubernetes
    - Exploring the capability of existing analytics and integrate to the tools: such as Google Trend API, IBM watson, Tableau and etc

- **Community Engagement:**
    - How to advertise SMM project and tools to the community; How to find our target audience and satisfy their needs
    - Workflow or standards to include new data source and algorithms

Writing your own tools

- **Could be anything novel that utilizing social media data and analyses; preferably using opensource libraries and algorithms that associates with academic publication**
- **Need to have a Graphic Interface**
- **Plan ahead: Need to communicate with Hubzero (where all the tools have been hosted) to decide if the technology stack you plan to use is compatible with their platform**