Project Overview Document

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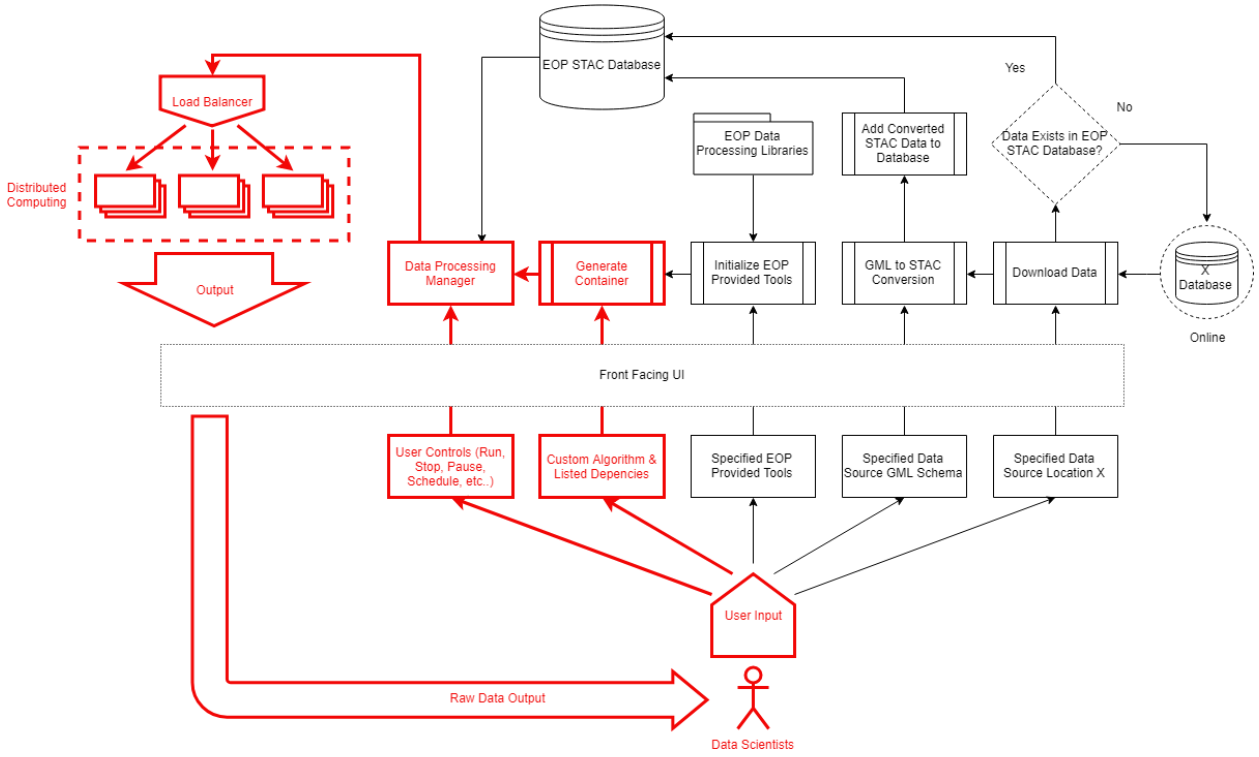
Overview Diagram

This is our high level architecture diagram from project 1. We have decided to focus on usability. The portion bolded in red is our target implementation.



Approach (Design/Solution)

Our focus was to show how a researcher might use a BYOA platform. Our system will allow researchers to upload and execute their algorithm in the cloud. Our initial design is to develop a simple command line interface which supports commands like “upload” and “run”. Their file will then be wrapped/injected into a docker file and then run on our server. By using containers users will be able to restore to snapshots of a docker images incase their data gets corrupted. Also, the use of a virtual machine provides security to our system. We are considering AWS as our cloud host as they have a large user base and offer lots of supporting documentation.

Team Structure

Scrum Master - Sam Charles
Product Owner - Michael Baart
Architecture Owner - Conor Butte-Landsfried

Timelines

The timeline for implementation of the features in the first diagram, will be on the order of weeks as we only have till april to get it done.

Week 1 (March 10 - 16)
- Set Up collaborative infrastructure
- Research tools
- Research BYOA type systems

Week 2 (March 17 - 23)
- Setup AWS infrastructure
- Test out deploying containers
- Implement functionality

Week 3 (March 24 - 30)
- Finalize implementation
- Write documentation

Risks

When examining our project, there are several risks that must be considered. The first risk that we must give thought to is the time frame in which we have to complete this project. Currently, we have just over three weeks to deliver the final product. The next risk comes with using new tools. We are familiar with the function of the tools but have never carried out an implementation. Due to this we must be careful when building our project. The last risk we must be aware of is that of our systems robustness. In this initial beta, we are expecting our system to do simple operations.

Tools

For this project we will be using two main tools, Docker and AWS. By combining these tools we will be able fully implement our project as outlined above. Docker will be used to set up the environment and contain our application. This will allow the researchers to not worry about anything except for their algorithm and data. By using AWS, we are making our application available to as wide an audience as possible.