Individual Requirements Analysis

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Introduction

CHAOSS is a community devoted to helping open source project health and sustainability. CHAOSS uses metrics, methodology, and software so that relevant stakeholders and make more informed decisions about open source software projects. Open source contributors want to know what projects they should be focusing on and if they are making improvements. That is where CHAOSS comes into play, they help the open source community by directing them to what project they would best be working on.

Software product overview

Augur is a project focused on open source software health metrics. Augur is focused on making sense of data using four human centered data science strategies. First, it compares open source software with other similar softwares. Second, make time a fundamental dimension in all metrics from the start so you can anticipate a trajectory. Third, all data driving visualizations should be downloadable because when you can see the underlying data people are more likely to trust the metrics. Finally, make all the visualizations downloadable as .svg’s because people want to put visualizations in reports to help explain things.

System Use

Admin

The admin is responsible for ensuring augur continues to stay up and running at all times. They are responsible for updating to software as needed and fixing any errors users come across. They are responsible for maintaining and updating and developer, investor, and software information in the database.

Developers

Software developers will enter in their information and skills and augur will return with softwares that would best fit the developers.

Investors

Investors would enter in information they are looking for from a software and augur will return softwares that matches the information entered.

System Requirements

Use Case 1: Enter Developer Information

Actors	Developer
Brief Description	The software developer would enter and store their information and skills into the augur database like name, email, and various skills they have.
Basic Flow of Events	1. Screen displays developer information entry 2. Developer enters information in appropriate fields 3. System displays developer information to verify it is correct

Use Case 2: Search Software

Actors	Investor
Brief Description	Investors enter information about a software they would like to invest in such as purpose, when it started, and how many people have made contributions.
Basic Flow of Events	1. Screen displays software information entry 2. Investor enters information about a software they are looking for 3. System displays information about software that best matches with entered information

System Function Specification

Augur Search Module (ASM)

The Augur Search Module will handle all operations that search the augur system.

ASM1: Main search screen
ASM2: Search results screen
ASM3: Filter search results
ASM4: Sort search results

Augur Settings Module (ASCHM)
The Augur Settings Module contains all of the storage and retrieval methods for user settings as well as a user interface for users to change their settings.

ASCHM1: User settings are loaded during login
ASCHM2: User settings screen allows settings to be changed
ASCHM3: Updated settings are saved to database
ASCHM4: Settings are automatically applied to every search the user performs

Non-Functional Requirements

Usability

- All users will be required to read the product's manual
- Administrators can expect to spend a half-hour to and hour to fully document a system configuration change

Reliability

- Average time between failures will exceed 6 months
- Application should be available 24/7 but maintenance could occur on the weekend before 6am

Performance

- A search for any information should be within 5 seconds
- The system should not take more than 2GB of hard drive space

Design Constraints

- The system should be compatible with previous versions
- Will run on Windows, Mac, and Linux systems
- System will not need to be designed to scale
- System will be developed using Flask web application, Python library, and REST server
- System will run as a downloadable executable and cannot be run as a web interface

Purchased Components

- Licenses for products

Interfaces

Software Interface

- The application server will communicate with the internal database server.