BELLE II EVENT DISPLAY WITH PHOENIX

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Google Summer of Code 2023 @ CERN-HSF

PROJECT BACKGROUND

The Belle II event display relies on ROOT TEve.

→ Requires the installation of the full Belle II software on the local machine.

→ Not suitable for modern client-server-based systems and requires significant effort from users.

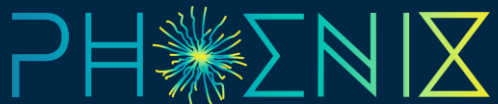
Solution implemented in GSoC project

Harnessing the display capabilities of today's web browsers for event display

→ Developing a web application using **Phoenix**, a TypeScript-based event display framework.

Technologies

- Typescript, Angular
- Phoenix
- JSROOT



PROJECT PROCESSES

Preparation – Community Bonding Period

→ Familiarizing myself with the organization and technologies, and then creating a dummy version of a Phoenix event display.

Data Extraction and Visualization – Official Coding Phase Begins!

→ Utilizing JSROOT to extract information from .root files and adapting it for web-based event display.

→ Using Phoenix to display the extracted data.

User Experience Improvement

→ Refining UI tools to elevate user experience.

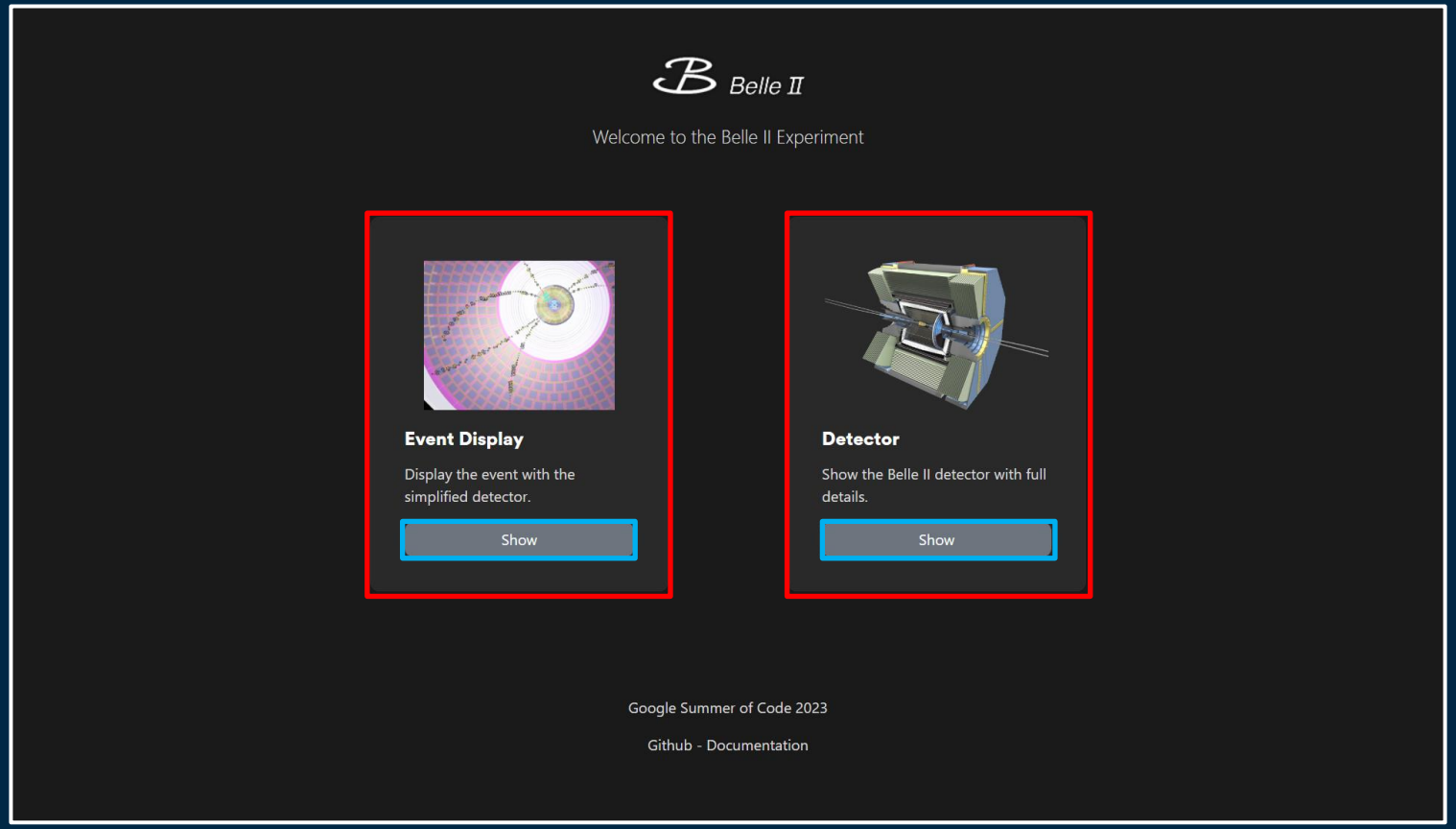
User Feedback Collection

→ Gathering feedback from trial users to enhance the application accordingly.

Documentation

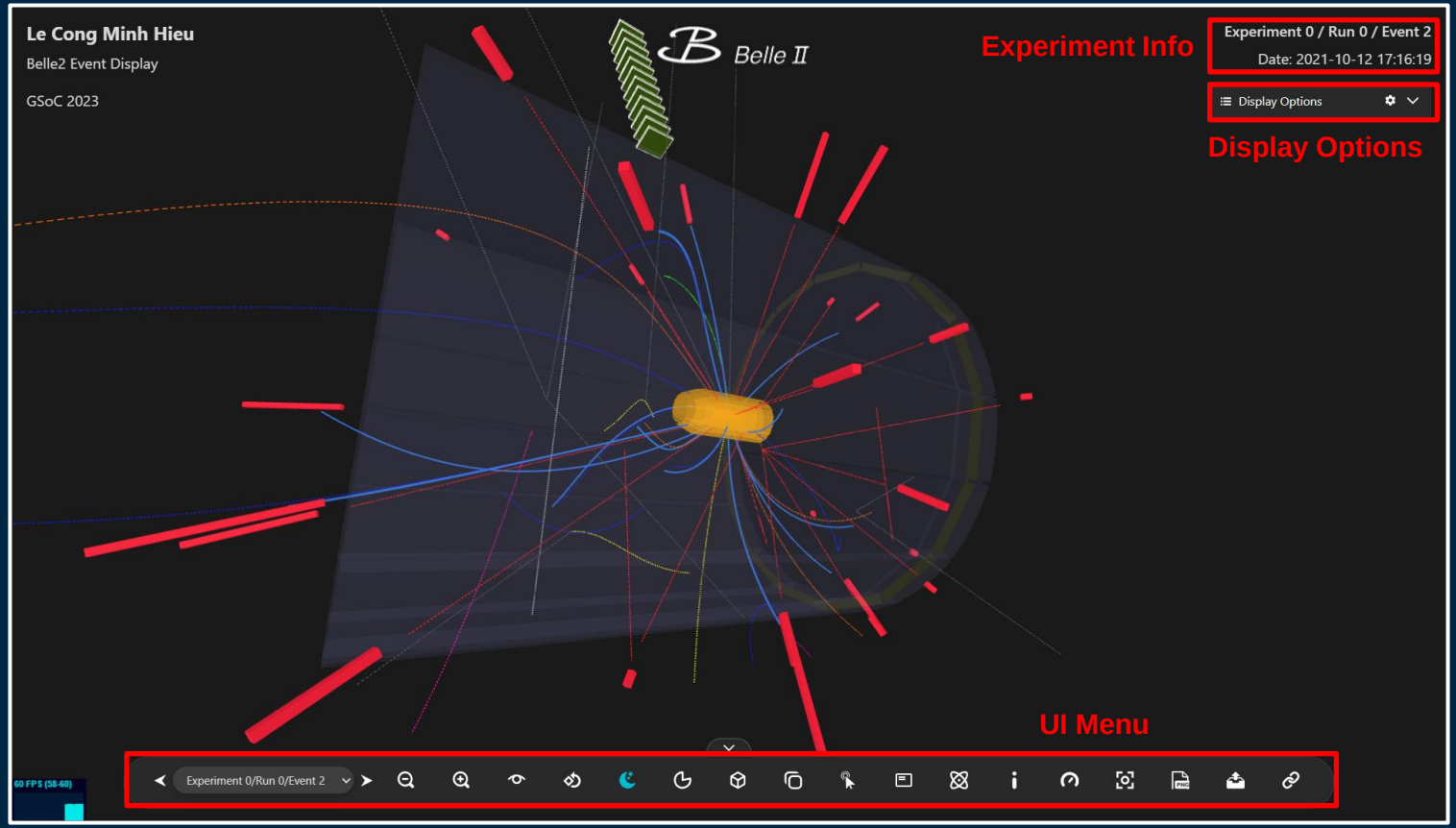
→ Writing comprehensive documentation for both users and developers.

DELIVERABLES – WEB APPLICATION



https://gsoc2023-belle2-display.netlify.app/#/

DELIVERABLES – WEB APPLICATION



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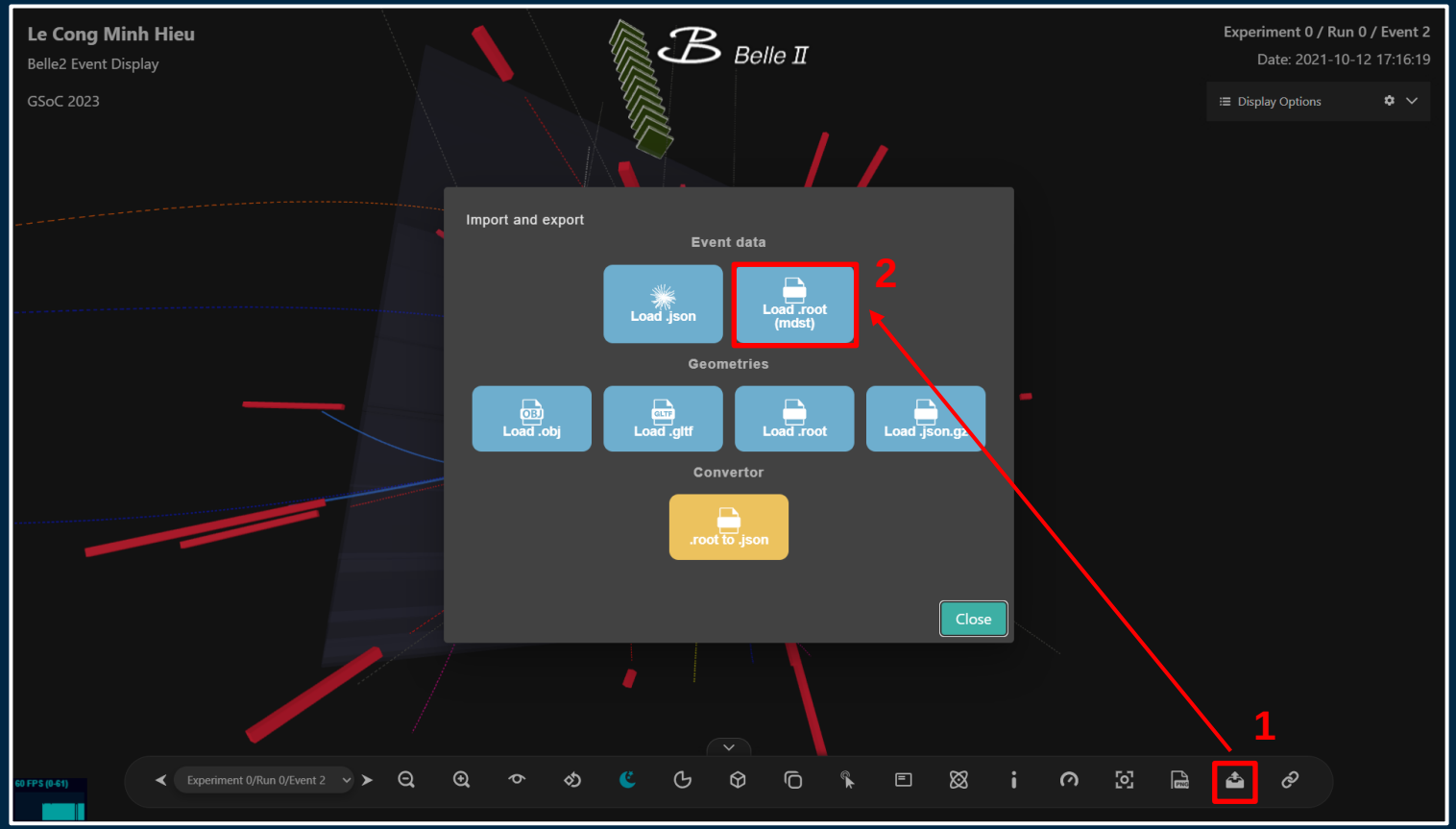

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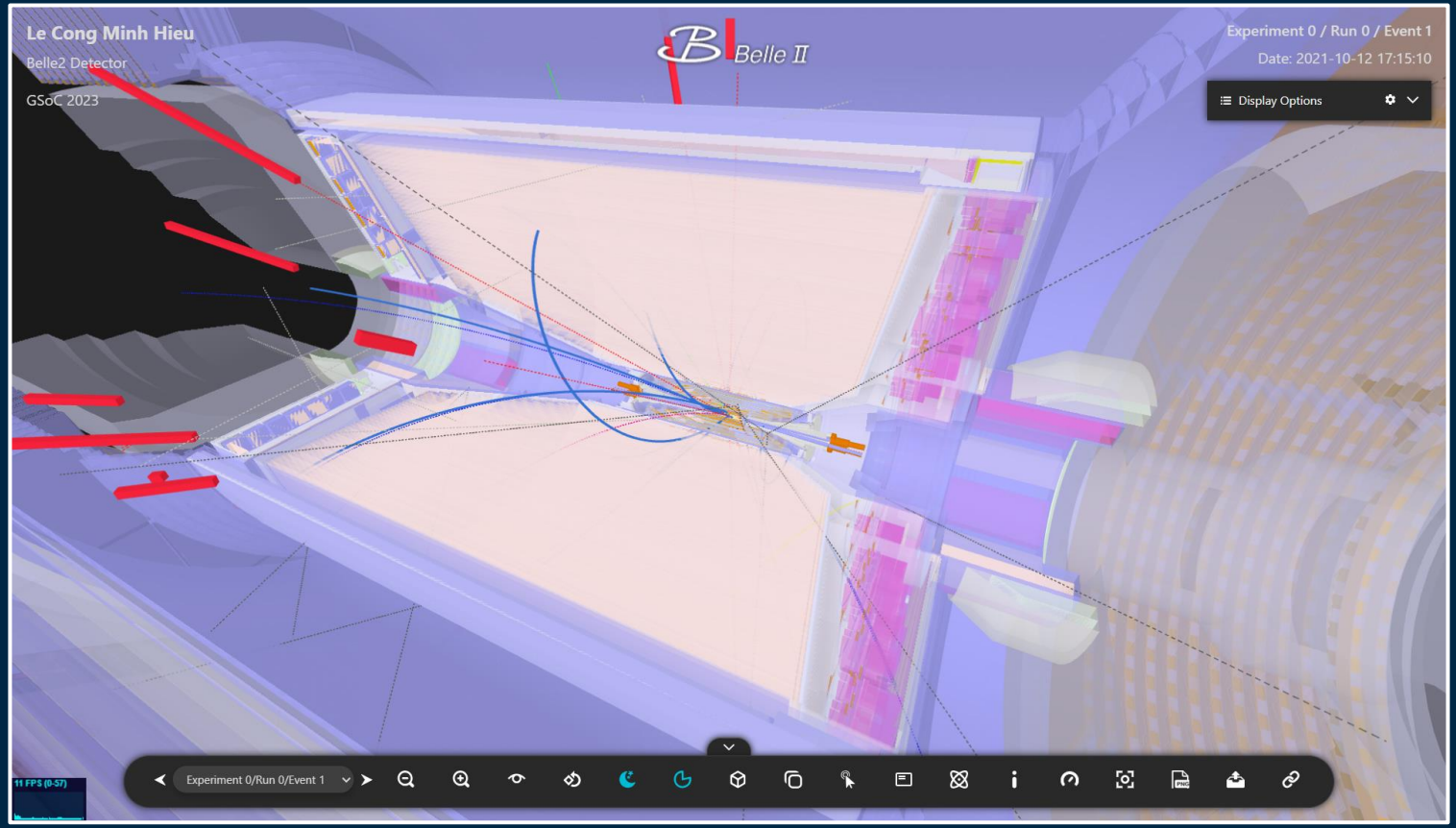

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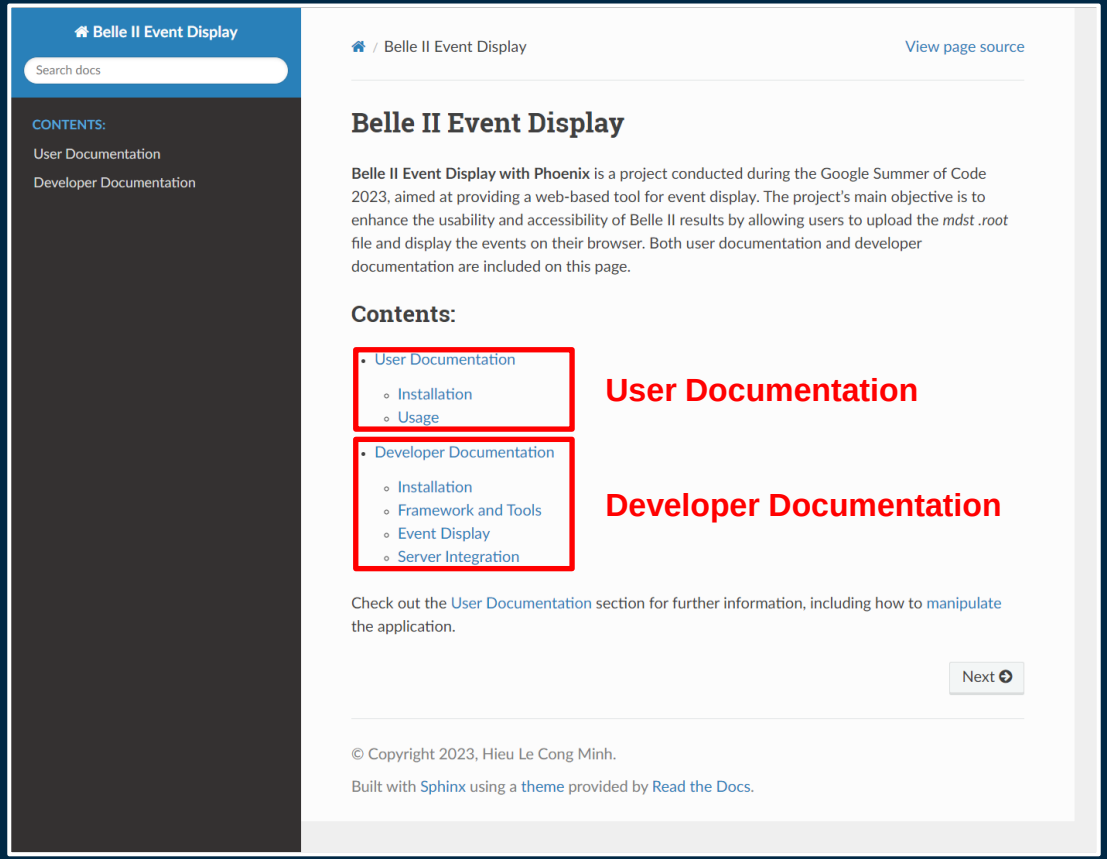
DELIVERABLES – DOCUMENTATION



https://gsoc2023-belle2-display-docs.netlify.app/

FURTHER DEVELOPMENT

Advancing widespread application

- Server implementation (a simple instruction included in the developer documentation).
- Integrating this application into the Belle II software ecosystem.

Exploring additional potentials

- Continuous frontend enhancements: Enhancing user-friendliness and accommodating diverse user requirements.
- Frequent maintenance: Ensuring ongoing reliability and performance.

THANK YOU FOR LISTENING!

Do you have any comments/questions?

You can contact me at hieu.lecongminh@gmail.com