Developer Guide for Project `HDF5_BLS`

Pierre Bouvet

March 4, 2025

1 Introduction

This document serves as the developer guide for the `HDF5_BLS` project. It provides details about the project structure, coding conventions, and instructions for development and contribution.

2 Project Structure

The project has the following structure:

```
HDF5_BLS/
|-- .github/
|-- docs/
|-- guides/
|-- HDF5_BLS/
|-- HDF5_BLS_GUI/
|-- spreadsheets/
|-- tests/
|-- .gitignore
|-- CONTRIBUTING.md
|-- LICENSE.md
|-- pyproject.toml
|-- README.md
|-- requirements.txt
|-- setup.py
```

2.1 Key Components

- **.github**/: GitHub configuration files.

- **docs**/: Documentation files for the project.

- **guides**/: The repository to find guides and extra documentation.

- **HDF5_BLS**/: Contains the source code for the project.

- **HDF5_BLS_GUI**/: Contains the source code for the GUI.

- **spreadsheets**/: Contains example and reference spreadsheets for the parameters of the instrument and measures.

- **tests**/: Contains unit tests for the project.

- **.gitignore**: Specifies files and directories to be ignored by Git.

- **CONTRIBUTING.md**: Guidelines for contributing to the project.

- **LICENSE.md**: License for the project.

- **pyproject.toml**: Configuration file for the Python project.

- **README.md**: Overview of the project.

- **requirements.txt**: Specifies the Python dependencies.

- **setup.py**: Defines the package and installation requirements.

3   Installation

To set up the project locally:

1. Clone the repository:

```
git clone https://github.com/PierreBouvet/HDF5_BLS_v1
cd HDF5_BLS_v1
```

2. Install the required dependencies:

```
pip install -r requirements.txt
```

4   Running the Tests

To ensure the code is working as expected, run the tests using the following command:

```
pytest
```

5   Development Workflow

5.1   Branching Strategy

Use the following Git branching strategy:

- **main**: Stable code ready for production.

- **feature/{name}**: New features under development.

- **bugfix/{name}**: Bug fixes.

6 Contribution Guidelines

- Fork the repository and create a new branch for your changes.

- Ensure all tests pass before submitting a pull request.

- Write clear and concise commit messages.

- Provide detailed descriptions in pull requests.

- Add tests for new features or bug fixes in the `tests/` directory.

7 Contact

For questions or suggestions, please contact the maintainer at pierre.bouvet@meduniwien.ac.at.