Source Finder Project

Introduction:-

This document outlines the future steps for the Source Finder project (Numerical Software).

There are several areas where the software can be expanded and improved to increase efficiency, scalability, and usability.

Planned Enhancements:

1. Performance Optimization:-

Improve the algorithm's performance to allow faster computation and handling of larger data .

* 1. Vectorization: Implement vectorized operations using libraries like NumPy to speed up mathematical computations.
  2. Parallel Processing: Distribute the workload across multiple CPUs or GPUs, reducing overall computation time.

1. CI/CD Pipeline Integration:
   1. Integrating a CI/CD Pipeline will enhance the development workflow for the software.
2. Scalability and Deployment

Ensure the application scales efficiently and deploys seamlessly in different environments.

1. Containerization Enhancements: Optimize Docker container setup for better performance and security.
2. Kubernetes Autoscaling: Implement Kubernetes Horizontal Pod Autoscaler (HPA) to automatically scale the application based on demand.
3. Testing

Improve the reliability and maintainability of the project.

Comprehensive Testing: Develop a comprehensive suite of unit and performance tests.

1. Monitoring :
   1. Integrating monitoring tools to track the health and performance of the application. Maybe like Prometheus and Grafana.