

Software Requirements Specification

Viper-Rocks 3338

May 10, 2025

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Version History

Version	Date	Description
0.1	May 16, 2025	Initial requirements for core features
0.2	May 23, 2025	Added reporting and CSV export requirements
0.3	May 30, 2025	Added Data Export and TestRail integration requirements
1.0	May 31, 2025	Final review; updated legal and ethical considerations

1 Introduction

- **Purpose:** Define functional and non-functional requirements for the lunar rock analysis system
- **Intended Audience:** Developers, testers, and project stakeholders
- **Overview:** Snapshot 4 finalizes requirements and refines all interface and integration details

2 External Interface Requirements

2.1 User Interface

- Upload Screen: file picker and project selector
- Scouting View: segmented gallery display
- Sizing Canvas: draw/undo/redo controls and measurement display
- Classification Panel: category selection icons
- Reporting Dashboard: tables and charts with filter options
- Export Dialog: format chooser and download action
- TestRail Dashboard: test-run summary view with links to test cases

2.2 Software Interfaces

POST /api/images Upload images and receive image IDs

GET /api/images/{id}/segments Retrieve image segments

POST /api/measure Submit measurement data

POST /api/classify Submit classification data

GET /api/export?format={csv,pdf} Download exported data

GET /api/testrail/runs Fetch TestRail test-run summaries

3 Legal and Ethical Considerations

- Exported files must exclude personal identifiers or sensitive data
- All data transmission shall occur over HTTPS to ensure confidentiality
- Data retention policies must comply with institutional and legal guidelines
- Comply with international data protection regulations
- Adhere to TestRail API usage terms and license agreements

4 Glossary

UI User Interface

API Application Programming Interface

CSV Comma-Separated Values

PDF Portable Document Format

TR TestRail

PII Personally Identifiable Information

5 References

- Project brief: <https://ascent.cysun.org/project/project/view/227>
- SDD source: <https://github.com/Chris111111111/Viper-Rocks/blob/main/docs/SDD.tex>