

**Institute of Primate Research**

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| **SOP No.** | **Issue Number** | **Issue Date** | **Revision Status** | **Revision Date** |
| **SOP/KIPRE/RPD/DSAS/3.1.76** | **Version 01** | **October 2025** | **-** | **-** |

**STANDARD OPERATING PROCEDURE (SOP) DOCUMENT**

**Reproducible coding practices (Git, R Markdown, Jupyter.)**

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| **Approvals** |  |  |  |
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# PURPOSE

To ensure all DS&AS coding practices are transparent, reproducible, version-controlled, and auditable.

# SCOPE

Applies to all coding activities in DS&AS projects, including statistical analysis, machine learning, bioinformatics pipelines, and reporting.

# PERSONS RESPONSIBLE:

* **All DS&AS Analysts and Data Scientists:** Follow reproducible coding practices.
* **Data Engineer:** Maintains version-control repositories.
* **Head of DS&AS:** Monitors compliance with reproducibility standards.

# FREQUENCY

* Applied **throughout project lifecycle**.
* **Quarterly audits** of repositories for compliance.

# MATERIALS

* Git/GitHub/GitLab for version control.
* R Markdown, Jupyter Notebooks, Quarto for documentation.
* Institutional coding standards and templates.

# PROCEDURE

1. **Repository Setup:** Create project repository in Git (institutional or GitHub Enterprise).
2. **Version Control:** Commit all scripts with meaningful messages; use branching for feature development.
3. **Reproducible Documentation:** Use R Markdown/Jupyter/Quarto for analyses, embedding code and results together.
4. **Collaboration:** Use pull requests and peer code review before merging.
5. **Archiving:** Tag final project versions; store outputs and code in DS&AS repository.
6. **Audit:** Quarterly review of repositories for compliance with reproducibility standards.

# REFERENCES