Best Practices: Guidelines, Resources, and Education
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The Computational Infrastructure for Geodynamics (CIG) established its best practices for software development and tutorials in 2016. These "best practices" should be expanded beyond their current scope of succinct guidelines to include examples demonstrating their application and tutorials for educating the community, especially new user-developers. Additional best practices (guidelines, examples, and tutorials) should be developed to address specific topics, such as continuous integration, build configuration, use of containers, and simulation/analysis workflows. The guidelines should strive to reflect consensus opinions of the computer science and computational science communities; the examples should include alternative implementations of those guidelines; and the tutorials should explain the rationale behind the guidelines, advantages and disadvantages of the alternative implementations, and suitability of their use in various applications.