



# NIMH OpenNeuro PET Support

## Declarative Schema Proposal

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The OpenNeuro-PET team has described the desire for the BIDS validator (BEP009) to be refactored with declarative and schematic rules, as well as be language agnostic and easily contributable for the community. Rather than building a whole new validator, which would be quite costly and time consuming, and require the maintenance of two separate validators (Python and current JavaScript versions), Squishymedia proposes that the most efficient way to achieve these goals is as follows:

- Add as much of the specification as possible to the existing schema in the [bids-spec repo](#).
- Convert the current JavaScript implementation to be able to validate datasets based on those schema.
- Break up the codebase into discreet and manageable parts, which interact via clearly defined internal APIs.
- Refactor the codebase to use more language agnostic patterns.

This proposal encapsulates a significant refactor of the current JavaScript validator but it aims to:

- A. Make the validator more extensible without the need for complex code modifications by making it reliant on an external, declarative schema.
- B. Make the validator's code more readable and easier for community contributors to navigate by restructuring the code to a modular, API driven architecture and by relying on fewer low-level JavaScript strategies.

Along with providing a much more maintainable validator than we currently have, this strategy would also benefit from the thorough test coverage that is already implemented in the current version of the validator. Whereas an entirely new test suite would need to be both added and verified against the current functionality for a new Python validator.

In summary, the recommendations in this proposal aim to provide a more easily maintainable validator that is extensible and contributor-friendly, while also taking advantage of the extensive test and production infrastructure of the existing codebase.