**Python static code analysis**

Unique rules to find Bugs, Vulnerabilities, Security Hotspots, and Code Smells in your PYTHON code

### [HTTP responses should not be vulnerable to session fixation](https://rules.sonarsource.com/python/RSPEC-6287)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-6287)

### [Dynamic code execution should not be vulnerable to injection attacks](https://rules.sonarsource.com/python/RSPEC-5334)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-5334)

### [NoSQL operations should not be vulnerable to injection attacks](https://rules.sonarsource.com/python/RSPEC-5147)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-5147)

### [HTTP request redirections should not be open to forging attacks](https://rules.sonarsource.com/python/RSPEC-5146)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-5146)

### [Deserialization should not be vulnerable to injection attacks](https://rules.sonarsource.com/python/RSPEC-5135)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-5135)

### [Endpoints should not be vulnerable to reflected cross-site scripting (XSS) attacks](https://rules.sonarsource.com/python/RSPEC-5131)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-5131)

### [Database queries should not be vulnerable to injection attacks](https://rules.sonarsource.com/python/RSPEC-3649)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-3649)

### [XML parsers should not be vulnerable to XXE attacks](https://rules.sonarsource.com/python/RSPEC-2755)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-2755)

### [A secure password should be used when connecting to a database](https://rules.sonarsource.com/python/RSPEC-2115)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-2115)

### [XPath expressions should not be vulnerable to injection attacks](https://rules.sonarsource.com/python/RSPEC-2091)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-2091)

### [I/O function calls should not be vulnerable to path injection attacks](https://rules.sonarsource.com/python/RSPEC-2083)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-2083)

### [LDAP queries should not be vulnerable to injection attacks](https://rules.sonarsource.com/python/RSPEC-2078)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-2078)

### [OS commands should not be vulnerable to command injection attacks](https://rules.sonarsource.com/python/RSPEC-2076)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-2076)

### [The number and name of arguments passed to a function should match its parameters](https://rules.sonarsource.com/python/RSPEC-930)

[Bug](https://rules.sonarsource.com/python/RSPEC-930)

### [The "open" builtin function should be called with a valid mode](https://rules.sonarsource.com/python/RSPEC-5828)

[Bug](https://rules.sonarsource.com/python/RSPEC-5828)

### [Only defined names should be listed in "\_\_all\_\_"](https://rules.sonarsource.com/python/RSPEC-5807)

[Bug](https://rules.sonarsource.com/python/RSPEC-5807)

### [Calls should not be made to non-callable values](https://rules.sonarsource.com/python/RSPEC-5756)

[Bug](https://rules.sonarsource.com/python/RSPEC-5756)

### [Property getter, setter and deleter methods should have the expected number of parameters](https://rules.sonarsource.com/python/RSPEC-5724)

[Bug](https://rules.sonarsource.com/python/RSPEC-5724)

### [Special methods should have an expected number of parameters](https://rules.sonarsource.com/python/RSPEC-5722)

[Bug](https://rules.sonarsource.com/python/RSPEC-5722)

### [Instance and class methods should have at least one positional parameter](https://rules.sonarsource.com/python/RSPEC-5719)

[Bug](https://rules.sonarsource.com/python/RSPEC-5719)

### [Boolean expressions of exceptions should not be used in "except" statements](https://rules.sonarsource.com/python/RSPEC-5714)

[Bug](https://rules.sonarsource.com/python/RSPEC-5714)

### [Caught Exceptions must derive from BaseException](https://rules.sonarsource.com/python/RSPEC-5708)

[Bug](https://rules.sonarsource.com/python/RSPEC-5708)

### [Item operations should be done on objects supporting them](https://rules.sonarsource.com/python/RSPEC-5644)

[Bug](https://rules.sonarsource.com/python/RSPEC-5644)

### [Raised Exceptions must derive from BaseException](https://rules.sonarsource.com/python/RSPEC-5632)

[Bug](https://rules.sonarsource.com/python/RSPEC-5632)

### [Operators should be used on compatible types](https://rules.sonarsource.com/python/RSPEC-5607)

[Bug](https://rules.sonarsource.com/python/RSPEC-5607)

### [Function arguments should be passed only once](https://rules.sonarsource.com/python/RSPEC-5549)

[Bug](https://rules.sonarsource.com/python/RSPEC-5549)

### [Iterable unpacking, "for-in" loops and "yield from" should use an Iterable object](https://rules.sonarsource.com/python/RSPEC-3862)

[Bug](https://rules.sonarsource.com/python/RSPEC-3862)

### [Variables, classes and functions should be defined before being used](https://rules.sonarsource.com/python/RSPEC-3827)

[Bug](https://rules.sonarsource.com/python/RSPEC-3827)

### [Identity operators should not be used with dissimilar types](https://rules.sonarsource.com/python/RSPEC-3403)

[Bug](https://rules.sonarsource.com/python/RSPEC-3403)

### [Only strings should be listed in "\_\_all\_\_"](https://rules.sonarsource.com/python/RSPEC-2823)

[Bug](https://rules.sonarsource.com/python/RSPEC-2823)

### ["\_\_init\_\_" should not return a value](https://rules.sonarsource.com/python/RSPEC-2734)

[Bug](https://rules.sonarsource.com/python/RSPEC-2734)

### ["yield" and "return" should not be used outside functions](https://rules.sonarsource.com/python/RSPEC-2711)

[Bug](https://rules.sonarsource.com/python/RSPEC-2711)

### [String formatting should not lead to runtime errors](https://rules.sonarsource.com/python/RSPEC-2275)

[Bug](https://rules.sonarsource.com/python/RSPEC-2275)

### [Recursion should not be infinite](https://rules.sonarsource.com/python/RSPEC-2190)

[Bug](https://rules.sonarsource.com/python/RSPEC-2190)

### [Silly equality checks should not be made](https://rules.sonarsource.com/python/RSPEC-2159)

[Bug](https://rules.sonarsource.com/python/RSPEC-2159)

### [Granting access to S3 buckets to all or authenticated users is security-sensitive](https://rules.sonarsource.com/python/RSPEC-6265)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-6265)

### [Hard-coded credentials are security-sensitive](https://rules.sonarsource.com/python/RSPEC-2068)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-2068)

### [Functions returns should not be invariant](https://rules.sonarsource.com/python/RSPEC-3516)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-3516)

### [The "exec" statement should not be used](https://rules.sonarsource.com/python/RSPEC-2317)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-2317)

### [Backticks should not be used](https://rules.sonarsource.com/python/RSPEC-2316)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-2316)

### [Methods and field names should not differ only by capitalization](https://rules.sonarsource.com/python/RSPEC-1845)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1845)

### [JWT should be signed and verified](https://rules.sonarsource.com/python/RSPEC-5659)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-5659)

### [Cipher algorithms should be robust](https://rules.sonarsource.com/python/RSPEC-5547)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-5547)

### [Encryption algorithms should be used with secure mode and padding scheme](https://rules.sonarsource.com/python/RSPEC-5542)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-5542)

### [Server hostnames should be verified during SSL/TLS connections](https://rules.sonarsource.com/python/RSPEC-5527)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-5527)

### [Insecure temporary file creation methods should not be used](https://rules.sonarsource.com/python/RSPEC-5445)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-5445)

### [Server certificates should be verified during SSL/TLS connections](https://rules.sonarsource.com/python/RSPEC-4830)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-4830)

### [LDAP connections should be authenticated](https://rules.sonarsource.com/python/RSPEC-4433)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-4433)

### [Cryptographic key generation should be based on strong parameters](https://rules.sonarsource.com/python/RSPEC-4426)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-4426)

### [Weak SSL/TLS protocols should not be used](https://rules.sonarsource.com/python/RSPEC-4423)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-4423)

### [Cipher Block Chaining IVs should be unpredictable](https://rules.sonarsource.com/python/RSPEC-3329)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-3329)

### [Regular expressions should not be vulnerable to Denial of Service attacks](https://rules.sonarsource.com/python/RSPEC-2631)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-2631)

### [Hashes should include an unpredictable salt](https://rules.sonarsource.com/python/RSPEC-2053)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-2053)

### [Regex lookahead assertions should not be contradictory](https://rules.sonarsource.com/python/RSPEC-6002)

[Bug](https://rules.sonarsource.com/python/RSPEC-6002)

### [Regex boundaries should not be used in a way that can never be matched](https://rules.sonarsource.com/python/RSPEC-5996)

[Bug](https://rules.sonarsource.com/python/RSPEC-5996)

### [Exceptions' "\_\_cause\_\_" should be either an Exception or None](https://rules.sonarsource.com/python/RSPEC-5707)

[Bug](https://rules.sonarsource.com/python/RSPEC-5707)

### ["break" and "continue" should not be used outside a loop](https://rules.sonarsource.com/python/RSPEC-1716)

[Bug](https://rules.sonarsource.com/python/RSPEC-1716)

### [Break, continue and return statements should not occur in "finally" blocks](https://rules.sonarsource.com/python/RSPEC-1143)

[Bug](https://rules.sonarsource.com/python/RSPEC-1143)

### [Allowing public ACLs or policies on a S3 bucket is security-sensitive](https://rules.sonarsource.com/python/RSPEC-6281)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-6281)

### [Using publicly writable directories is security-sensitive](https://rules.sonarsource.com/python/RSPEC-5443)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-5443)

### [Using clear-text protocols is security-sensitive](https://rules.sonarsource.com/python/RSPEC-5332)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-5332)

### [Expanding archive files without controlling resource consumption is security-sensitive](https://rules.sonarsource.com/python/RSPEC-5042)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-5042)

### [Signalling processes is security-sensitive](https://rules.sonarsource.com/python/RSPEC-4828)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-4828)

### [Configuring loggers is security-sensitive](https://rules.sonarsource.com/python/RSPEC-4792)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-4792)

### [Using weak hashing algorithms is security-sensitive](https://rules.sonarsource.com/python/RSPEC-4790)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-4790)

### [Disabling CSRF protections is security-sensitive](https://rules.sonarsource.com/python/RSPEC-4502)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-4502)

### [Using non-standard cryptographic algorithms is security-sensitive](https://rules.sonarsource.com/python/RSPEC-2257)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-2257)

### [Using pseudorandom number generators (PRNGs) is security-sensitive](https://rules.sonarsource.com/python/RSPEC-2245)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-2245)

### [Constants should not be used as conditions](https://rules.sonarsource.com/python/RSPEC-5797)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5797)

### ["SystemExit" should be re-raised](https://rules.sonarsource.com/python/RSPEC-5754)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5754)

### [Bare "raise" statements should only be used in "except" blocks](https://rules.sonarsource.com/python/RSPEC-5747)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5747)

### [Comparison to None should not be constant](https://rules.sonarsource.com/python/RSPEC-5727)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5727)

### ["self" should be the first argument to instance methods](https://rules.sonarsource.com/python/RSPEC-5720)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5720)

### [Function parameters' default values should not be modified or assigned](https://rules.sonarsource.com/python/RSPEC-5717)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5717)

### [Some special methods should return "NotImplemented" instead of raising "NotImplementedError"](https://rules.sonarsource.com/python/RSPEC-5712)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5712)

### [Custom Exception classes should inherit from "Exception" or one of its subclasses](https://rules.sonarsource.com/python/RSPEC-5709)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5709)

### [Bare "raise" statements should not be used in "finally" blocks](https://rules.sonarsource.com/python/RSPEC-5704)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5704)

### [Arguments given to functions should be of an expected type](https://rules.sonarsource.com/python/RSPEC-5655)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5655)

### [`str.replace` should be preferred to `re.sub`](https://rules.sonarsource.com/python/RSPEC-5361)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5361)

### [Unread "private" attributes should be removed](https://rules.sonarsource.com/python/RSPEC-4487)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-4487)

### [Cognitive Complexity of functions should not be too high](https://rules.sonarsource.com/python/RSPEC-3776)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-3776)

### [The first argument to class methods should follow the naming convention](https://rules.sonarsource.com/python/RSPEC-2710)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-2710)

### [Method overrides should not change contracts](https://rules.sonarsource.com/python/RSPEC-2638)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-2638)

### [Wildcard imports should not be used](https://rules.sonarsource.com/python/RSPEC-2208)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-2208)

### [String literals should not be duplicated](https://rules.sonarsource.com/python/RSPEC-1192)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1192)

### [Functions and methods should not be empty](https://rules.sonarsource.com/python/RSPEC-1186)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1186)

### [Server-side requests should not be vulnerable to forging attacks](https://rules.sonarsource.com/python/RSPEC-5144)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-5144)

### [Non-empty statements should change control flow or have at least one side-effect](https://rules.sonarsource.com/python/RSPEC-905)

[Bug](https://rules.sonarsource.com/python/RSPEC-905)

### [Replacement strings should reference existing regular expression groups](https://rules.sonarsource.com/python/RSPEC-6328)

[Bug](https://rules.sonarsource.com/python/RSPEC-6328)

### [Alternation in regular expressions should not contain empty alternatives](https://rules.sonarsource.com/python/RSPEC-6323)

[Bug](https://rules.sonarsource.com/python/RSPEC-6323)

### [Unicode Grapheme Clusters should be avoided inside regex character classes](https://rules.sonarsource.com/python/RSPEC-5868)

[Bug](https://rules.sonarsource.com/python/RSPEC-5868)

### [Regex alternatives should not be redundant](https://rules.sonarsource.com/python/RSPEC-5855)

[Bug](https://rules.sonarsource.com/python/RSPEC-5855)

### [Alternatives in regular expressions should be grouped when used with anchors](https://rules.sonarsource.com/python/RSPEC-5850)

[Bug](https://rules.sonarsource.com/python/RSPEC-5850)

### [New objects should not be created only to check their identity](https://rules.sonarsource.com/python/RSPEC-5796)

[Bug](https://rules.sonarsource.com/python/RSPEC-5796)

### [Collection content should not be replaced unconditionally](https://rules.sonarsource.com/python/RSPEC-4143)

[Bug](https://rules.sonarsource.com/python/RSPEC-4143)

### [Exceptions should not be created without being raised](https://rules.sonarsource.com/python/RSPEC-3984)

[Bug](https://rules.sonarsource.com/python/RSPEC-3984)

### [Collection sizes and array length comparisons should make sense](https://rules.sonarsource.com/python/RSPEC-3981)

[Bug](https://rules.sonarsource.com/python/RSPEC-3981)

### [All branches in a conditional structure should not have exactly the same implementation](https://rules.sonarsource.com/python/RSPEC-3923)

[Bug](https://rules.sonarsource.com/python/RSPEC-3923)

### [The output of functions that don't return anything should not be used](https://rules.sonarsource.com/python/RSPEC-3699)

[Bug](https://rules.sonarsource.com/python/RSPEC-3699)

### ["=+" should not be used instead of "+="](https://rules.sonarsource.com/python/RSPEC-2757)

[Bug](https://rules.sonarsource.com/python/RSPEC-2757)

### [Increment and decrement operators should not be used](https://rules.sonarsource.com/python/RSPEC-2319)

[Bug](https://rules.sonarsource.com/python/RSPEC-2319)

### [Return values from functions without side effects should not be ignored](https://rules.sonarsource.com/python/RSPEC-2201)

[Bug](https://rules.sonarsource.com/python/RSPEC-2201)

### [Related "if/else if" statements should not have the same condition](https://rules.sonarsource.com/python/RSPEC-1862)

[Bug](https://rules.sonarsource.com/python/RSPEC-1862)

### [Identical expressions should not be used on both sides of a binary operator](https://rules.sonarsource.com/python/RSPEC-1764)

[Bug](https://rules.sonarsource.com/python/RSPEC-1764)

### [All code should be reachable](https://rules.sonarsource.com/python/RSPEC-1763)

[Bug](https://rules.sonarsource.com/python/RSPEC-1763)

### [Loops with at most one iteration should be refactored](https://rules.sonarsource.com/python/RSPEC-1751)

[Bug](https://rules.sonarsource.com/python/RSPEC-1751)

### [Variables should not be self-assigned](https://rules.sonarsource.com/python/RSPEC-1656)

[Bug](https://rules.sonarsource.com/python/RSPEC-1656)

### [All "except" blocks should be able to catch exceptions](https://rules.sonarsource.com/python/RSPEC-1045)

[Bug](https://rules.sonarsource.com/python/RSPEC-1045)

### [Constructing arguments of system commands from user input is security-sensitive](https://rules.sonarsource.com/python/RSPEC-6350)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-6350)

### [Disabling auto-escaping in template engines is security-sensitive](https://rules.sonarsource.com/python/RSPEC-5247)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-5247)

### [Setting loose POSIX file permissions is security-sensitive](https://rules.sonarsource.com/python/RSPEC-2612)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-2612)

### [Formatting SQL queries is security-sensitive](https://rules.sonarsource.com/python/RSPEC-2077)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-2077)

### [Character classes in regular expressions should not contain only one character](https://rules.sonarsource.com/python/RSPEC-6397)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-6397)

### [Superfluous curly brace quantifiers should be avoided](https://rules.sonarsource.com/python/RSPEC-6396)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-6396)

### [Non-capturing groups without quantifier should not be used](https://rules.sonarsource.com/python/RSPEC-6395)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-6395)

### [Regular expressions should not contain empty groups](https://rules.sonarsource.com/python/RSPEC-6331)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-6331)

### [Regular expressions should not contain multiple spaces](https://rules.sonarsource.com/python/RSPEC-6326)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-6326)

### [Single-character alternations in regular expressions should be replaced with character classes](https://rules.sonarsource.com/python/RSPEC-6035)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-6035)

### [Reluctant quantifiers in regular expressions should be followed by an expression that can't match the empty string](https://rules.sonarsource.com/python/RSPEC-6019)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-6019)

### [Values assigned to variables should match their type annotations](https://rules.sonarsource.com/python/RSPEC-5890)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5890)

### [Function return types should be consistent with their type hint](https://rules.sonarsource.com/python/RSPEC-5886)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5886)

### [Character classes in regular expressions should not contain the same character twice](https://rules.sonarsource.com/python/RSPEC-5869)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5869)

### [Type checks shouldn't be confusing](https://rules.sonarsource.com/python/RSPEC-5864)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5864)

### [Regular expressions should not be too complicated](https://rules.sonarsource.com/python/RSPEC-5843)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5843)

### [Builtins should not be shadowed by local variables](https://rules.sonarsource.com/python/RSPEC-5806)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5806)

### [Implicit string and byte concatenations should not be confusing](https://rules.sonarsource.com/python/RSPEC-5799)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5799)

### [Identity comparisons should not be used with cached typed](https://rules.sonarsource.com/python/RSPEC-5795)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5795)

### [Expressions creating sets should not have duplicate values](https://rules.sonarsource.com/python/RSPEC-5781)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5781)

### [Expressions creating dictionaries should not have duplicate keys](https://rules.sonarsource.com/python/RSPEC-5780)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5780)

### [Special method "\_\_exit\_\_" should not re-raise the provided exception](https://rules.sonarsource.com/python/RSPEC-5706)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5706)

### [Unused scope-limited definitions should be removed](https://rules.sonarsource.com/python/RSPEC-5603)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5603)

### [Functions and methods should not have identical implementations](https://rules.sonarsource.com/python/RSPEC-4144)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-4144)

### [Unused private nested classes should be removed](https://rules.sonarsource.com/python/RSPEC-3985)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-3985)

### [String formatting should be used correctly](https://rules.sonarsource.com/python/RSPEC-3457)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-3457)

### [Conditional expressions should not be nested](https://rules.sonarsource.com/python/RSPEC-3358)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-3358)

### [Loops without "break" should not have "else" clauses](https://rules.sonarsource.com/python/RSPEC-2836)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-2836)

### [Doubled prefix operators "not" and "~" should not be used](https://rules.sonarsource.com/python/RSPEC-2761)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-2761)

### [The "print" statement should not be used](https://rules.sonarsource.com/python/RSPEC-2320)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-2320)

### ["<>" should not be used to test inequality](https://rules.sonarsource.com/python/RSPEC-2318)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-2318)

### [Two branches in a conditional structure should not have exactly the same implementation](https://rules.sonarsource.com/python/RSPEC-1871)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1871)

### [Unused assignments should be removed](https://rules.sonarsource.com/python/RSPEC-1854)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1854)

### [A field should not duplicate the name of its containing class](https://rules.sonarsource.com/python/RSPEC-1700)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1700)

### [Function names should comply with a naming convention](https://rules.sonarsource.com/python/RSPEC-1542)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1542)

### [Functions and lambdas should not reference variables defined in enclosing loops](https://rules.sonarsource.com/python/RSPEC-1515)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1515)

### [Sections of code should not be commented out](https://rules.sonarsource.com/python/RSPEC-125)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-125)

### [Unused function parameters should be removed](https://rules.sonarsource.com/python/RSPEC-1172)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1172)

### [Unused class-private methods should be removed](https://rules.sonarsource.com/python/RSPEC-1144)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1144)

### [Track uses of "FIXME" tags](https://rules.sonarsource.com/python/RSPEC-1134)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1134)

### ["Exception" and "BaseException" should not be raised](https://rules.sonarsource.com/python/RSPEC-112)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-112)

### [Redundant pairs of parentheses should be removed](https://rules.sonarsource.com/python/RSPEC-1110)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1110)

### [Nested blocks of code should not be left empty](https://rules.sonarsource.com/python/RSPEC-108)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-108)

### [Functions, methods and lambdas should not have too many parameters](https://rules.sonarsource.com/python/RSPEC-107)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-107)

### [Collapsible "if" statements should be merged](https://rules.sonarsource.com/python/RSPEC-1066)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1066)

### [Logging should not be vulnerable to injection attacks](https://rules.sonarsource.com/python/RSPEC-5145)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-5145)

### [Repeated patterns in regular expressions should not match the empty string](https://rules.sonarsource.com/python/RSPEC-5842)

[Bug](https://rules.sonarsource.com/python/RSPEC-5842)

### [Function parameters initial values should not be ignored](https://rules.sonarsource.com/python/RSPEC-1226)

[Bug](https://rules.sonarsource.com/python/RSPEC-1226)

### [Disabling versioning of S3 buckets is security-sensitive](https://rules.sonarsource.com/python/RSPEC-6252)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-6252)

### [Disabling server-side encryption of S3 buckets is security-sensitive](https://rules.sonarsource.com/python/RSPEC-6245)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-6245)

### [Having a permissive Cross-Origin Resource Sharing policy is security-sensitive](https://rules.sonarsource.com/python/RSPEC-5122)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-5122)

### [Delivering code in production with debug features activated is security-sensitive](https://rules.sonarsource.com/python/RSPEC-4507)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-4507)

### [Allowing both safe and unsafe HTTP methods is security-sensitive](https://rules.sonarsource.com/python/RSPEC-3752)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-3752)

### [Creating cookies without the "HttpOnly" flag is security-sensitive](https://rules.sonarsource.com/python/RSPEC-3330)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-3330)

### [Creating cookies without the "secure" flag is security-sensitive](https://rules.sonarsource.com/python/RSPEC-2092)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-2092)

### [Using hardcoded IP addresses is security-sensitive](https://rules.sonarsource.com/python/RSPEC-1313)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-1313)

### [Regular expression quantifiers and character classes should be used concisely](https://rules.sonarsource.com/python/RSPEC-6353)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-6353)

### [Character classes should be preferred over reluctant quantifiers in regular expressions](https://rules.sonarsource.com/python/RSPEC-5857)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5857)

### [A subclass should not be in the same "except" statement as a parent class](https://rules.sonarsource.com/python/RSPEC-5713)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5713)

### [Walrus operator should not make code confusing](https://rules.sonarsource.com/python/RSPEC-5685)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-5685)

### [Jump statements should not be redundant](https://rules.sonarsource.com/python/RSPEC-3626)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-3626)

### ["pass" should not be used needlessly](https://rules.sonarsource.com/python/RSPEC-2772)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-2772)

### ["except" clauses should do more than raise the same issue](https://rules.sonarsource.com/python/RSPEC-2737)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-2737)

### [Boolean checks should not be inverted](https://rules.sonarsource.com/python/RSPEC-1940)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1940)

### [Unused local variables should be removed](https://rules.sonarsource.com/python/RSPEC-1481)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1481)

### [Local variable and function parameter names should comply with a naming convention](https://rules.sonarsource.com/python/RSPEC-117)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-117)

### [Field names should comply with a naming convention](https://rules.sonarsource.com/python/RSPEC-116)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-116)

### [Class names should comply with a naming convention](https://rules.sonarsource.com/python/RSPEC-101)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-101)

### [Method names should comply with a naming convention](https://rules.sonarsource.com/python/RSPEC-100)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-100)

### [Track uses of "TODO" tags](https://rules.sonarsource.com/python/RSPEC-1135)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1135)

### [HTML autoescape mechanism should not be globally disabled](https://rules.sonarsource.com/python/RSPEC-5439)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-5439)

### [Variables, classes and functions should be either defined or imported](https://rules.sonarsource.com/python/RSPEC-5953)

[Bug](https://rules.sonarsource.com/python/RSPEC-5953)

### ["\_\_exit\_\_" should accept type, value, and traceback arguments](https://rules.sonarsource.com/python/RSPEC-2733)

[Bug](https://rules.sonarsource.com/python/RSPEC-2733)

### ["return" and "yield" should not be used in the same function](https://rules.sonarsource.com/python/RSPEC-2712)

[Bug](https://rules.sonarsource.com/python/RSPEC-2712)

### [Track lack of copyright and license headers](https://rules.sonarsource.com/python/RSPEC-1451)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1451)

### [HTTP response headers should not be vulnerable to injection attacks](https://rules.sonarsource.com/python/RSPEC-5167)

[Vulnerability](https://rules.sonarsource.com/python/RSPEC-5167)

### [Regular expressions should be syntactically valid](https://rules.sonarsource.com/python/RSPEC-5856)

[Bug](https://rules.sonarsource.com/python/RSPEC-5856)

### [Sending emails is security-sensitive](https://rules.sonarsource.com/python/RSPEC-5300)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-5300)

### [Reading the Standard Input is security-sensitive](https://rules.sonarsource.com/python/RSPEC-4829)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-4829)

### [Using command line arguments is security-sensitive](https://rules.sonarsource.com/python/RSPEC-4823)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-4823)

### [Encrypting data is security-sensitive](https://rules.sonarsource.com/python/RSPEC-4787)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-4787)

### [Using regular expressions is security-sensitive](https://rules.sonarsource.com/python/RSPEC-4784)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-4784)

### [Dynamically executing code is security-sensitive](https://rules.sonarsource.com/python/RSPEC-1523)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-1523)

### [Cyclomatic Complexity of functions should not be too high](https://rules.sonarsource.com/python/RSPEC-1541)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1541)

### [Control flow statements "if", "for", "while", "try" and "with" should not be nested too deeply](https://rules.sonarsource.com/python/RSPEC-134)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-134)

### [Cyclomatic Complexity of classes should not be too high](https://rules.sonarsource.com/python/RSPEC-1311)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1311)

### ["\" should only be used as an escape character outside of raw strings](https://rules.sonarsource.com/python/RSPEC-1717)

[Bug](https://rules.sonarsource.com/python/RSPEC-1717)

### [Using shell interpreter when executing OS commands is security-sensitive](https://rules.sonarsource.com/python/RSPEC-4721)

[Security Hotspot](https://rules.sonarsource.com/python/RSPEC-4721)

### [Functions should use "return" consistently](https://rules.sonarsource.com/python/RSPEC-3801)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-3801)

### [Python parser failure](https://rules.sonarsource.com/python/RSPEC-2260)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-2260)

### [Files should not be too complex](https://rules.sonarsource.com/python/RSPEC-1908)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1908)

### [Docstrings should be defined](https://rules.sonarsource.com/python/RSPEC-1720)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1720)

### [Functions should not have too many lines of code](https://rules.sonarsource.com/python/RSPEC-138)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-138)

### [Track uses of "NOSONAR" comments](https://rules.sonarsource.com/python/RSPEC-1291)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1291)

### [Track comments matching a regular expression](https://rules.sonarsource.com/python/RSPEC-124)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-124)

### [Statements should be on separate lines](https://rules.sonarsource.com/python/RSPEC-122)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-122)

### [Functions should not contain too many return statements](https://rules.sonarsource.com/python/RSPEC-1142)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1142)

### [Files should not have too many lines of code](https://rules.sonarsource.com/python/RSPEC-104)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-104)

### [Lines should not be too long](https://rules.sonarsource.com/python/RSPEC-103)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-103)

### [Methods and properties that don't access instance data should be static](https://rules.sonarsource.com/python/RSPEC-2325)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-2325)

### [New-style classes should be used](https://rules.sonarsource.com/python/RSPEC-1722)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1722)

### [Parentheses should not be used after certain keywords](https://rules.sonarsource.com/python/RSPEC-1721)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1721)

### [Track "TODO" and "FIXME" comments that do not contain a reference to a person](https://rules.sonarsource.com/python/RSPEC-1707)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1707)

### [Module names should comply with a naming convention](https://rules.sonarsource.com/python/RSPEC-1578)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1578)

### [Comments should not be located at the end of lines of code](https://rules.sonarsource.com/python/RSPEC-139)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-139)

### [Lines should not end with trailing whitespaces](https://rules.sonarsource.com/python/RSPEC-1131)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1131)

### [Files should contain an empty newline at the end](https://rules.sonarsource.com/python/RSPEC-113)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-113)

### [Long suffix "L" should be upper case](https://rules.sonarsource.com/python/RSPEC-1129)

[Code Smell](https://rules.sonarsource.com/python/RSPEC-1129)