| **Programming Language** | **What is the language good for?** | **Advantages** | **Disadvantages** | **Security issues** |
| --- | --- | --- | --- | --- |
| Haskell | Robust software that needs to be maintained  Academics/math or algebra | Concise syntax  Easily read  Automatic memory management  Higher Order Functions | Low performs from lack of memory control  Lack of support  High learning curve  Not ideal for tracking states | Space leaks from lazy evaluation  Can be caused by infinite lists  Lazy evaluation can make these errors hard to predict |
| JavaScript | Primarily used for web development | Very portable  Easy to learning  Lots of support  Flexible b/c of support | Inconsistent b/c of many interpreters and browsers  Many security issues  Not all browsers support | XSS  CSRF  Third-Party Security  Prototype Pollution |
| PHP | Web Tool/Language | Open Source  Integrable with HTML/XML/JS etc.  Flexible  Great database integration with SQL | Poor documentation  Poor debugging  Open source can create security risk | XSS  SQL Injection  Weak Input validation |
| Kotlin | Android development  Anything with Java | Code is readable and concise  Great compiler support  Convenient for Java users | Small community  Rigid syntax | Lack of code obfuscation  Most Java vulnerabilities |
| R | Data Science  Statistics |  |  | Potential buffer overflow  Path traversal exploit  Malicious packages |
| Perl |  |  |  |  |
| Bash/Shell |  |  |  |  |
| C# |  |  |  |  |
| Dart |  |  |  |  |
| Rust |  |  |  |  |
| TupeScript |  |  |  |  |
| VB |  |  |  |  |
| Ruby |  |  |  |  |
| Python |  |  |  |  |
| Swift |  |  |  |  |
| Go |  |  |  |  |
| HTML |  |  |  |  |
| Assembly |  |  |  |  |
| Java |  |  |  |  |
| C/C++ |  |  |  |  |