Golang Guide: A List of Top Golang Frameworks, IDEs & Tools

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Since its introduction, Google's Go Programming Language (Golang) has been experiencing an increasing popularity among mainstream users. In a December 2016 survey, 89% of the 3,595 respondents claimed that they program in Go at work or outside of work.

Additionally, Go ranks highest among the programming languages in terms of expertise and preference. This July 2017, Go ranks 10th in Tiobe's Programming Language of the Year, jumping from its 55th ranking last year.

Clearly, Go is attracting many programmers from various disciplines and software development outsourcing professionals. And it's safe to say that this is due to the ease of using Go.

As a compiled, open-source programming language, Go makes it easy for developers to build simple, reliable, and efficient software. It is the product of

With Go, the amount of code typing is reduced and writing robust APIs without sacrificing its performance has become easier. Designed for scalability and concurrency, Go makes optimizations possible. A compiler can perform all the code inspection work before runtime.

We've compiled a list of the top frameworks, IDEs, and tools for Golang for your quick reference. Bookmark it on your browser so that you can come back whenever you're working with Go!

Frameworks for Golang

Web frameworks help developers build applications as easily and quickly as possible. Go is still relatively new, so it's important to use frameworks with sufficient documentation.

Here are 9 frameworks you can use to help you build projects using the Go Language.

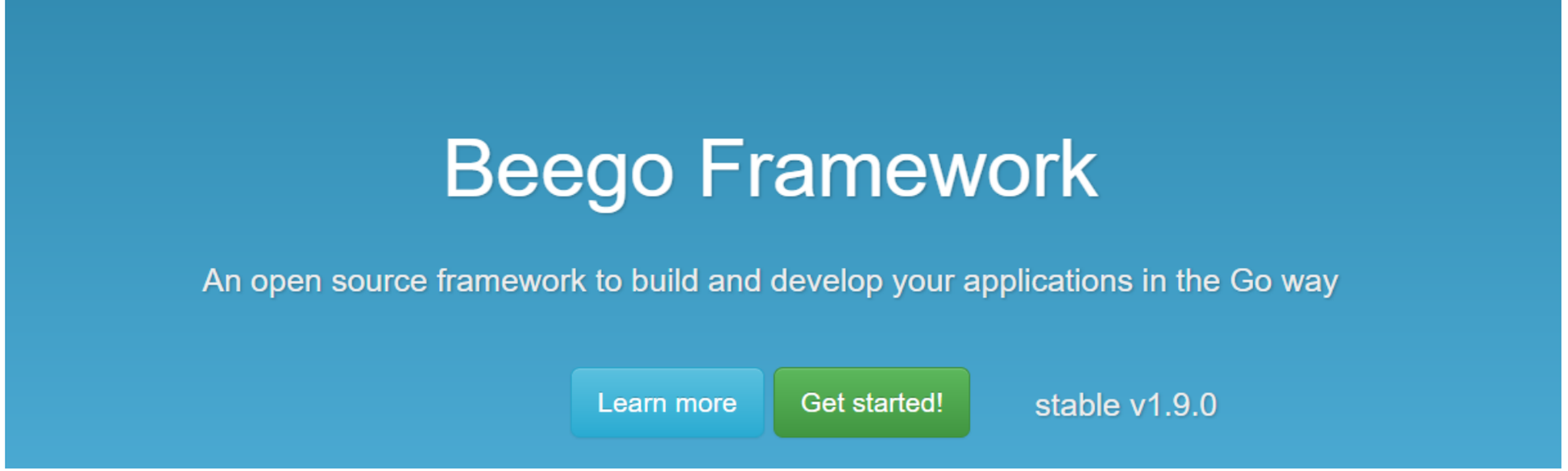
1. Revel

As a high productivity framework for Go, Revel includes a Hot Code Reload tool that lets you rebuild your project on every file change. It also includes a wide variety of comprehensive and high-performance features, so you don't need to find external libraries to integrate into the framework.

2. Beego

Beego is a full-fledged MVC framework with its own logging library, ORM, and web frameworks. You don't need to find and install third-party libraries. It features a built-in tool called Bee Tool that watches out for code changes and runs tasks when changes are detected.

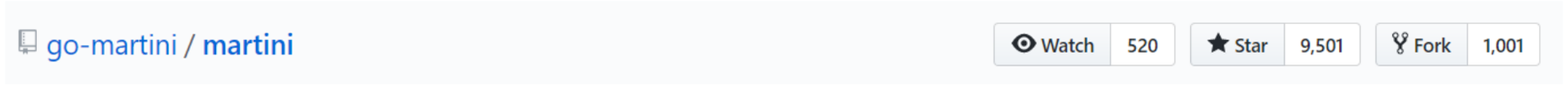
Beego will save you a lot of hours, especially in the beginning of a project when you're figuring out the logging framework or application structure.



3. Martini

Inspired by Sinatra, Martini is an extremely light but powerful framework. It was developed for writing modular web applications and services in Golang.

It features a non-intrusive design that's quick and easy to use and includes a wide range of handlers and middleware. It's capable of performing basic routing, exception handling, and default document serving for AngularJS apps in HTML5 mode.



Martini's best feature is its use of reflection, which lets developers dynamically insert data into the handler functions and add new services. Martini is also fully compatible with the http.HandlerFunc interface. The downside, though, is that the Martini framework is no longer maintained.

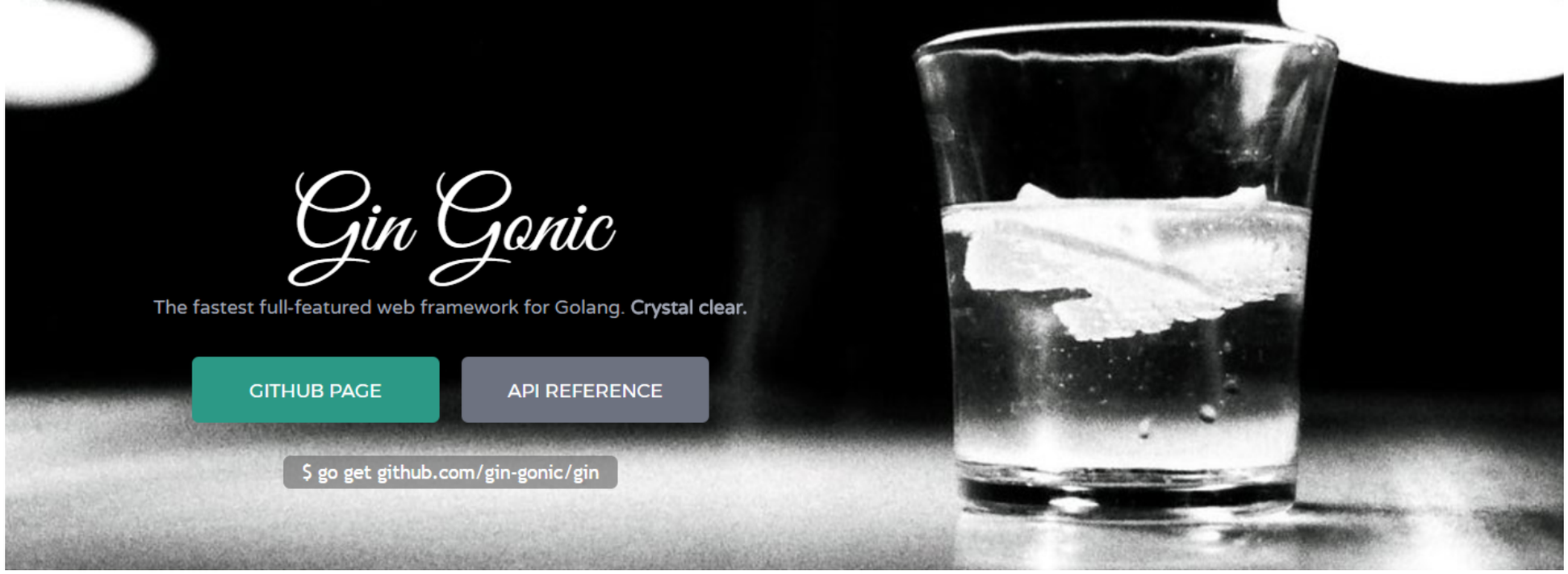
```go
package main

import "github.com/go-martini/martini"

func main() {
  m := martini.Classic()
  m.Get("/", func() string {
    return "Hello world!"
  })
  m.Run()
}
```

4. Gin Gonic

Gin Gonic is a web framework with a martini-like API, but with much better performance. If you've used Martini before, then you'll be familiar with Gin Gonic. Otherwise, it will only take you 10 minutes to learn Gin. It's that easy!

Gin Gonic is a minimalistic framework that includes only the most essential libraries and features. This makes it perfect for developing high-performance REST APIs. Plus, it's 40 times faster than Martini.

You can add middleware, nested groups, JSON validation, and rendering, but it still maintains its optimum performance. Gin Gonic uses httprouter, the fastest HTTP router for Go.



5. Buffalo

Building new web applications with Go is quick and simple with Buffalo. When you're starting a new project, Buffalo already has everything setup for you —from front-end to back-end development.

It features Hot Reloading, which means that dev command will watch your .go and .html files automatically. It will then rebuild and restart your binary for you. Just run the dev command, and you'll see the changes go live right before your eyes!

Buffalo is more than just a framework – it's a holistic web development eco-system that lets you get straight to building your application.

6. Goji

Goji is a lightweight and fast web framework that has composability and simplicity as its main priority. Much like net/http.ServeMux, Goji is a minimalistic HTTP request multiplexer. It includes Einhorn support, which makes it possible for you to have websocket support in Goji.

Additional features include URL patterns, re-configurable middleware stack, graceful shutdown, and more. Goji can be used in production and has served billions of requests across several organizations.

7. Tiger Tonic

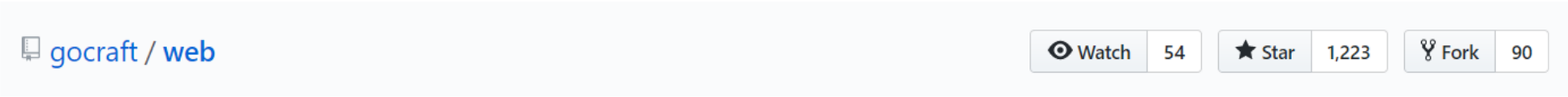
Inspired by Dropwizard, Tiger Tonic is a Go framework for developing JSON web services and building high-performance REST APIs. To stay true to the principles of Golang, Tiger Tonic strives to keep features orthogonal.

8. Gocraft

Another powerful yet minimalistic framework, Gocraft offers fast and scalable routing performance. It adds routing to the net/http package from the standard library.

Gocraft is a Go mux and middleware package that features casting and reflection capabilities so that you can type your code statically. You can also add an optional functionality with the built-in middleware or write your own.

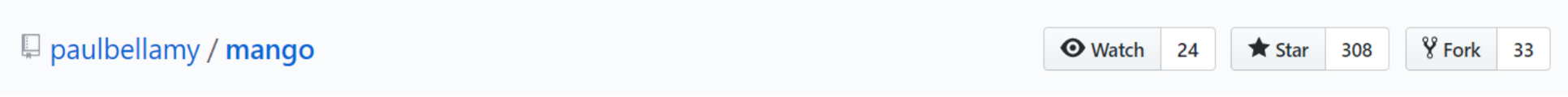
Since performance is always one of the top concerns for developers, Gocraft is a great choice for developers. It's very easy to write backend web applications using the Gocraft framework.



9. Mango

Although Mango is not actively maintained by its creator, Paul Bellamy, a lot of Go users still use it. The great thing about Mango is its modularity. You can choose from a variety of libraries to include in your project.

Mango lets you build reusable modules of HTTP functionality as quickly and easily as possible. It compiles a list of middleware and application into a single http server object to keep your code self-contained.



IDEs for Golang are gaining popularity, along with the Go Language. While many developers still prefer to use text editors, many prefer to use IDEs as well.

If you're working on a large-scale project with an extensive codebase, an IDE can help you organize your code and navigate it with ease. Furthermore, IDEs can help you test your code and edit them accordingly.

Here are the top IDEs that work great with Golang.

1. Gogland

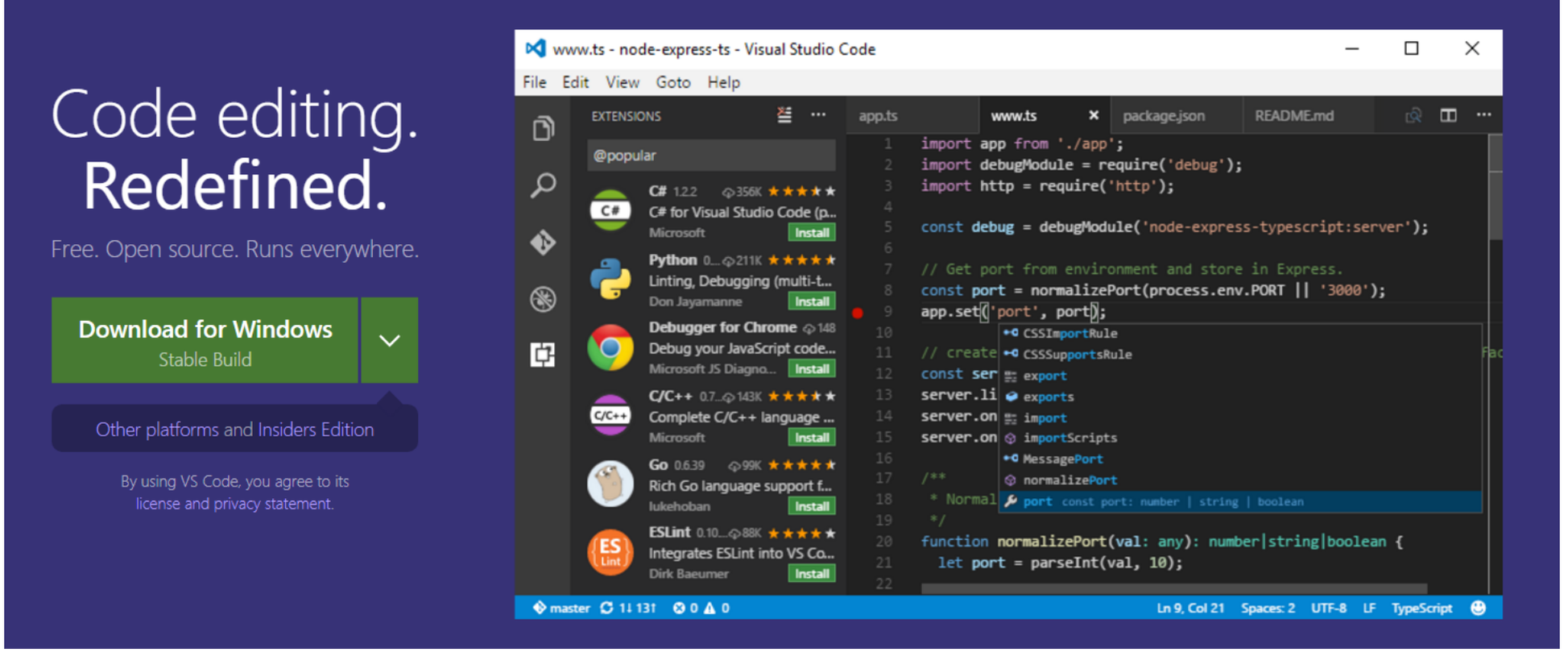
Software development company JetBrains released another reliable IDE, but this time, for Golang. Gogland is a commercial IDE that provides a robust ergonomic environment for Go developers. It also features coding assistance, debugger, and an integrated terminal.

Because an established company created Gogland, it has an extensive IntelliJ plugin ecosystem where you can get additional tools should you need more.

2. Visual Studio Code

Created by Microsoft, Visual Studio Code is a full-featured, open-source IDE and code editor that supports a wide variety of programming languages. It features smart completion with IntelliSense; debugging using break points, call stacks, and an interactive console; built-in Git integration; and hierarchical folder and file explorer.

As another popular IDE, Visual Studio Code has a supportive community of Go developers that regularly contribute. With Visual Studio Code, you can extend functionalities with the array of available plugins.



3. LiteIDE

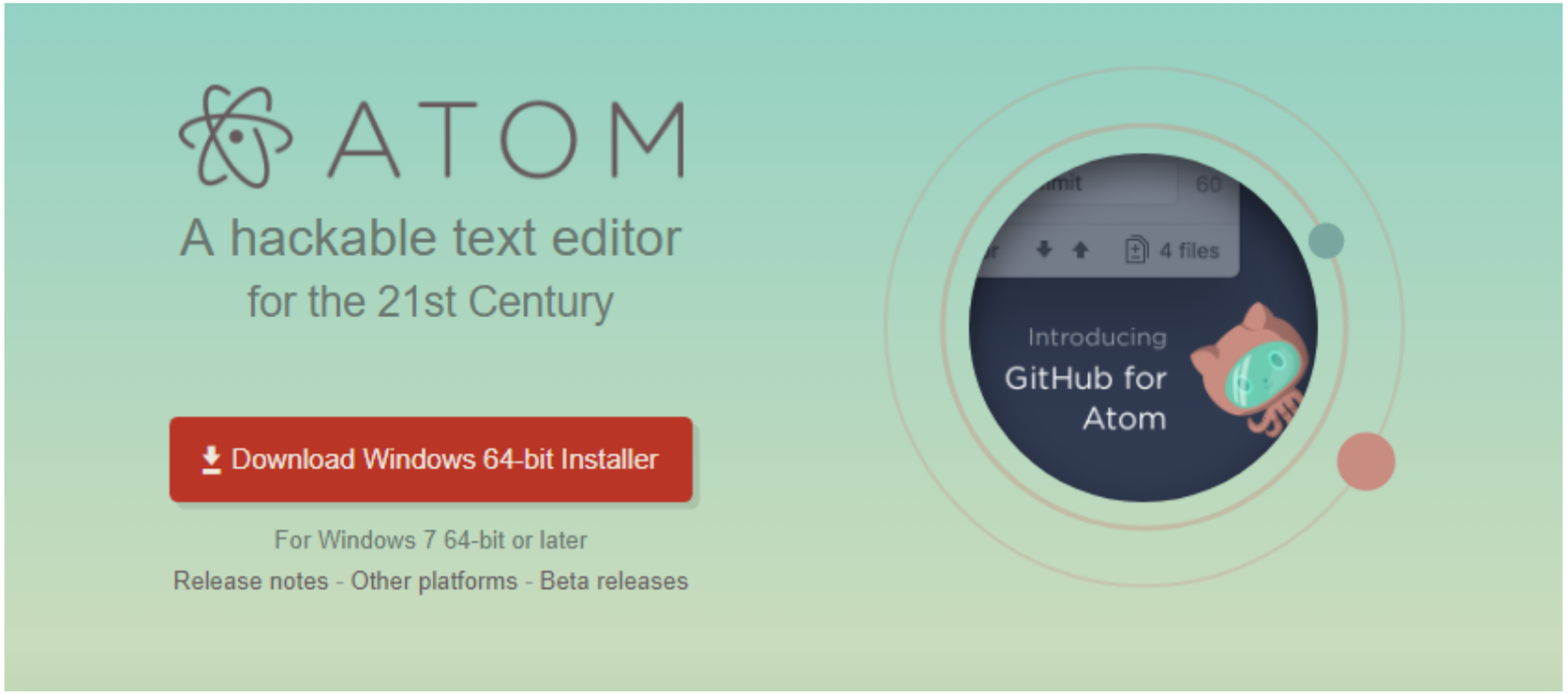
LiteIDE is among the first Golang-centric, open-source IDEs that was created more than 5 years ago. As a C++ Qt application with a unique look and feel, LiteIDE offers code management, configurable build commands, gdb and Delve debugger, auto-completion and theming with WordApi, MIME type based system, and more. It also provides JSON and Golang support.

4. Wide

Wide is a web-based IDE for Golang programmers. It's designed for collaborative development and works best for teams and web development agencies. Wide features include code highlight, debugging, Git integration, and more.

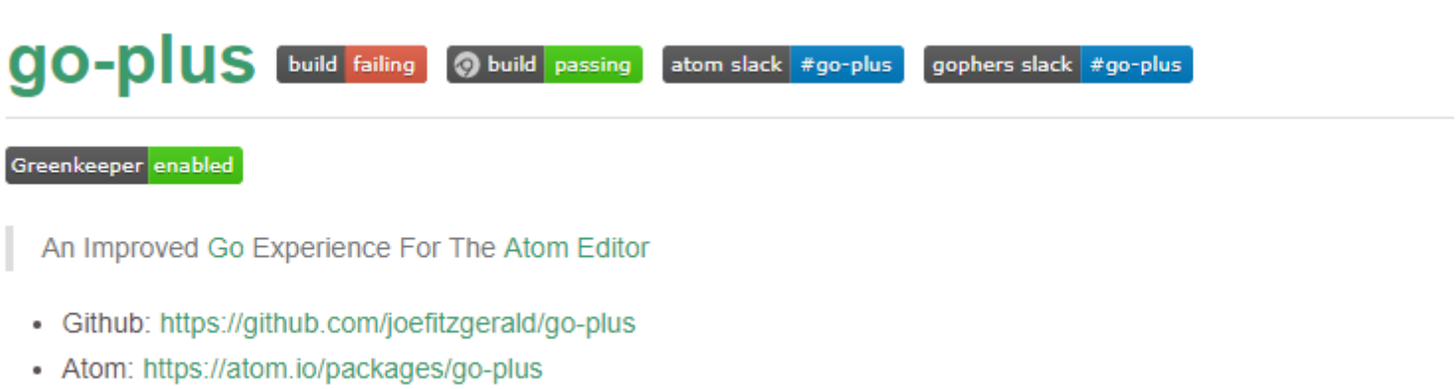
Because Wide is created and maintained by a Chinese developer, most of its documentation and support are in Chinese.

If you're already using Atom, your code editing experience in Golang can be improved with an open-source package called go-plus. With go-plus, you get instant, real-time feedback on your syntax and build errors.



The go-plus package offers almost all Golang support in Atom. It can also be used for tools, build flows, linters, vet and coverage tools.

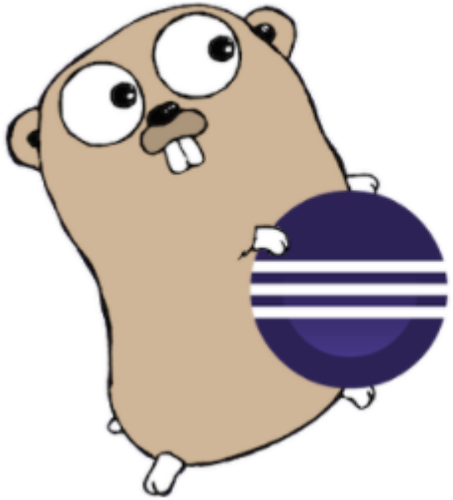
Go-plus also includes various code snippets and features such as autocomplete with gocode, code formatting with gofmt, goreturns, or goimports, and more.



6. Eclipse with GoClipse

Because Eclipse is a widely popular IDE, numerous plugins have been created for it. GoClipse is an Eclipse plugin for Golang that offers Go source code editing with configurable syntax highlighting and automatic indentation and brace completion.

GoClipse also serves as a project wizard and builder that reports syntax and build errors instantly. Additional features of GoClipse include debugging functionality and code assist.



GoClipse is an Eclipse IDE for the Go programming language.

- Features
- Installation
- User Guide
- Github (Latest Release) (Reporting Issues)

- GoClipse User Group - For discussion and help with GoClipse

7. Sublime Text with GoSublime

Sublime Text is another sophisticated text editor with a large community of contributors and developers. As such, a wide variety of plugins has been created for this IDE.

GoSublime is a Golang plugin for Sublime Text 3 that offers code completion from Gocode, lint/syntax check while you're wiring code, automatic addition and removal of package imports, and more.

DisposaBoy / GoSublime

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Vim-go is a powerful plugin suite for writing and developing Go. Its features include advanced source code analysis, adding and removing import paths, multiple 3rd liner support, goto definition, quick file executions, and much more.

Vim-go is highly customizable, with individual features that can be enabled or disabled according to your need.

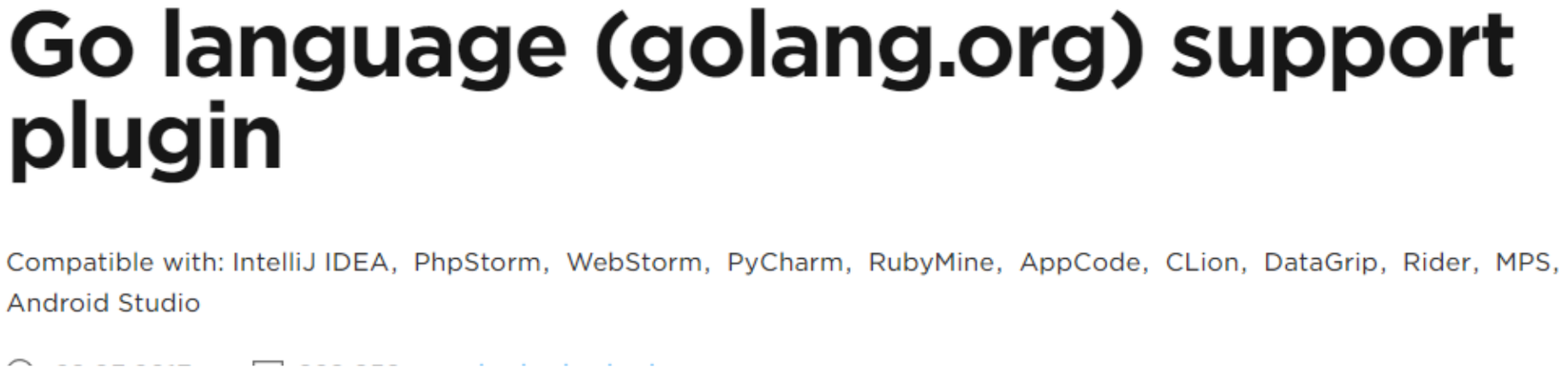
9. Komodo

Komodo is a full-featured Go language IDE that supports other programming languages such as Node.js, Python, Ruby, Perl, and more. With this Go IDE,

The great thing about Komodo is that it works great for team collaboration since multiple developers can edit a document simultaneously. Komodo can be installed on Mac, Windows, or Linux with just one license.

10. IntelliJ IDEA with Go Language (golang.org) Support Plugin

IntelliJ IDEA (same company as JetBrains) is an IDE that can be used with Golang through the Go language support plugin. If you want to use IntelliJ IDEA with Golang, you need to install this plugin, albeit with limited features as opposed to Gogland.



Tools for Golang

Golang tools can be used for a wide variety of projects and web applications. Developers can write code and build applications as quickly and easily as possible with these helpful tools.

Here's a list of the top Golang tools for your reference.

1. Apicompat

Apicompat is a new Go language tool that helps developers detect backwards, incompatible changes and exported declarations.

With Apicompat, you can avoid false positives. However, not every backwards incompatible change can be detected by Apicompat. Swapping argument parameters and other changes still need to be considered by the library author.

```
-vcs    (auto|git|svn|etc) - Version control system to use (default: auto)
-before revision           - Revisions to check as before  (default: if unstaged changes, check those, else check las
-after  revision           - Revisions to check as after   (default: if unstaged changes, check those, else check las
-vcsDir path               - Path to root VCS directory    (default: let VCS tool search)
-all                       - Show non-breaking changes as well as breaking (default: false)

apicompat        # current package only
apicompat ./...  # check subdirectory packages
```

2. Checkstyle

3. Depth

Depth is another useful Golang tool that helps web developers retrieve and visualize Go source code dependency trees. It can be used as a standalone command-line application or as a particular package within your own project. You can add customizations by simply setting the appropriate flags on the Tree before resolving.

```
import "github.com/KyleBanks/depth"

t := depth.Tree {
  ResolveInternal: true,
  ResolveTest: true,
  MaxDepth: 10,
}


err := t.Resolve("strings")
```

4. Go-Swagger

This toolkit includes a wide variety of features and functions. Go-Swagger is an implementation of Swagger 2.0, and can serialize and deserialize swagger specifications. It's a minimalist yet powerful representation of your RESTful API.

Development of this toolkit is sponsored by VMware:

5. Go Meta Linter

If you need to run Go lint tools and normalize their output concurrently, that's exactly what Go Meta Linter can do for you. Go Meta Linter is intended to be used with a text editor or an IDE integration such as Sublime Linter plugin, Atom go-plus package, Emacs Flycheck checker, Vim/Neovim, and Go for Visual Studio Code. It also supports a wide variety of linters and configuration files like JSON.

Go-callvis is a web development tool that allows you to visualize the call graph of your Go program with Graphviz's dot format. This tool is especially useful when building large projects with complex codebases. This is also useful when you want to understand another developer's code structure or rebuild someone else's project.

With go-callvis, developers can focus specific package within a program; group functions according to package and methods according to type; and limit packages to custom path prefixes, and ignore those that contain them.

go-callvis

release v0.3.5 build passing gophers slack #go-callvis

7. Gonative

Gonative is a simple Golang tool that lets you build Go toolchains with native libs, which can be cross-compiled while still utilizing the Cgo-enabled versions of the stdlib packages.

Gonative downloads the binary distributions for each platform and copies their libraries into its proper places. At the same time, Gonative sets the

8. Grapes

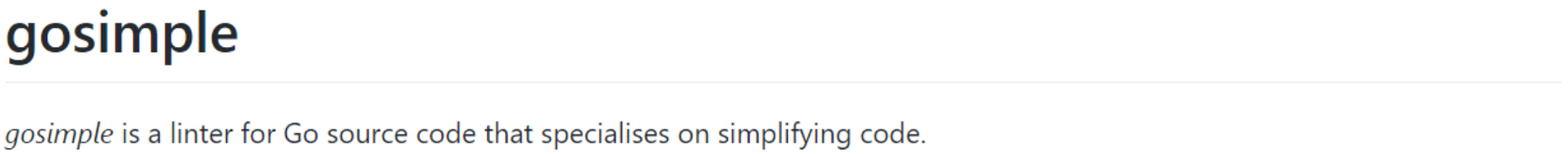
Grapes is a lightweight Golang tool designed to distribute commands over ssh easily. It's written and actively maintained by Yaron Sumel.

Grapes will soon support full host key validation, so that's something developers should watch out for.

9. Gosimple

The great thing about this Golang linter is that it focuses on simplifying Go source code. Gosimple always targets the latest Go version, so it requires Go version 1.6 or later.

If there's a new Go release, gosimple will suggest the easiest and simplest methods to avoid complicated constructs.



10. Go Vendor

Go Vendor is the Golang tool that works with the standard Vendor folder. It allows developers to copy existing dependencies from $GOPATH with govendor add/update. You can also directly pull new dependencies or update existing dependencies with govendor fetch and move legacy systems with govendor migrate.

Wrapping It Up

If you're coming from a JS/Node background, you need to learn some new programming concepts such as coroutines, channels, strict typing with compilation, interfaces, structs, pointers, and some other differences. But, once you get into the groove, you'll find Golang easier and faster to use.

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