

The
Comprehensive

Java Developer's Resource Guide

BuildBetter / v2.2.AMJ17

The Tool Issue

Table of Contents

Editor's Welcome	3
The Java Profiler Profile	5
Tools	7
Java Development.....	8
App Performance.....	11
Errors and Logs Tools	12
Web Extension Tools.....	14
Messaging Distribution Tools	17
The OOPs Concepts.....	18
Appendix.....	20



Jayme Thomason
/ Editor / BuildBetter Magazine

Buildbetter
v2.2

Get it done.

Dear Builder,

This issue of BuildBetter Magazine might look a little different than past issues. In previous issues, we've shared a lot of interviews and invited many amazing guests to write articles. While we love great editorial (obviously), we also recognize when it's just time to GSD. That brings us to the current issue - The Comprehensive Java Developer's Resource Guide.

You haven't seen anything like this before (we know, because we tried looking for it and couldn't find one). We've attempted to compile a HUGE resource guide for you that makes it easy to continue growing in and honing your dev skills. We know how it is, you get busy doing your day-job, and learning new things seems to take a back seat. Well, it's our hope that we can encourage you to keep learning, keep pushing the boundaries and keep making awesome apps - but to do that, you have to stay sharp.

For this issue, we searched far and wide for the hottest, must-have tools, influencers to follow, best books and greatest podcasts. We also found and included the most informative YouTube channels, most helpful LinkedIn groups, and most important events. After all of this information, you're thinking to yourself "I don't have time to do all of those things." Well lucky for you, we included a bonus resource that will help you try it all before the end of the year, so you'll want to make sure to check that out on page 27.



Even if developing in Java isn't in your wheelhouse, many of the tools and resources we've listed support multiple languages, so you're bound to find something you can use no matter what technology you're developing in.

In order to be ahead of the next big thing, you have to make sure you're on top of the latest and greatest in the industry. It's impossible to know what you don't know, so we wanted to give you a hand. We hope you find this resource guide as useful as we have.

Did we miss a Java tool you love? Have a question for us? Feel free to reach out to us @Stackify on Twitter.

Build On,

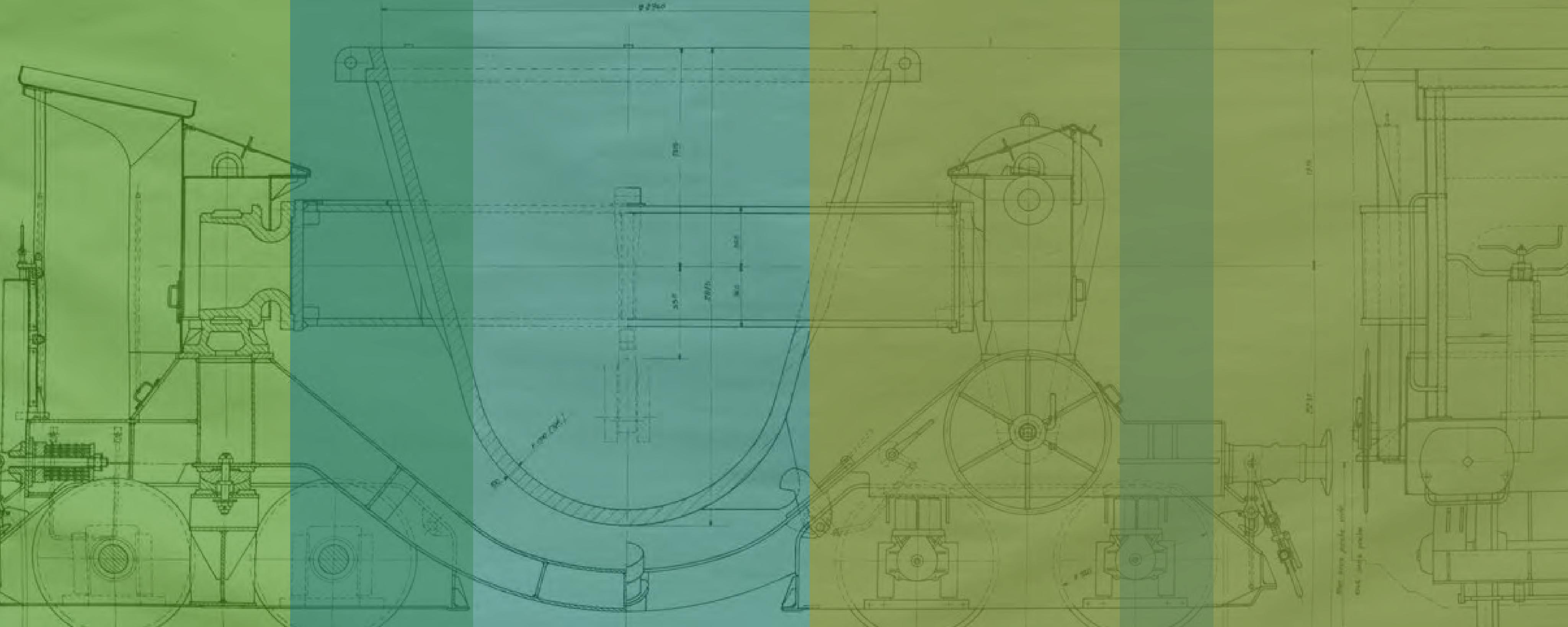
Jayme Thomason



Build/better
stackify.com/buildbetter

 [@jaymethomason](https://twitter.com/jaymethomason)
 [/in/jaymethomason/](https://www.linkedin.com/in/jaymethomason/)

Jayme Thomason is not only an editor for BuildBetter magazine, she has spent her 12-year career solving the most complex digital challenges for companies of all sizes. She has built several successful businesses, including software company DivvyHQ, and her latest venture, Brink Insights, where her team of technical experts helps software companies analyze their digital systems, uncover opportunities for growth and implement experiments to find core drivers of business.



The Java Profiler Profile

Debugging performance issues in production can be a pain and in some cases impossible without the right tools. Java profilers have been around forever, but the profilers most developers think about are only one type - there are actually three:

- 1. Standard JVM Profilers** that track every detail of the JVM (CPU, thread, memory, garbage collection, etc).
- 2. Lightweight profilers** that highlight your application with a bit of abstraction.
- 3. Application Performance Management (APM) tools** used for monitoring applications live in production environments.

Standard JVM Profilers

A standard Java profiler certainly provides the most data, but not necessarily the most usable information. This depends on the type of debugging task. These profilers will track all method calls and memory usage which allows a developer to dive into the call structure at whatever angle they choose.

Lightweight Java Transaction Profilers

Lightweight profilers take a different approach at tracking your application by injecting themselves right into the code. Aspect Profilers use aspect-oriented programming (AOP) to inject code into the start and end of specified methods. Java Agent profilers use the Java Instrumentation API to inject code into your application.



Low Overhead, Java JVM Profiling in Production (APM)

All the profilers so far have been great for development, but tracking how your system performs in production is critical. Production is always a different landscape – development and staging setups typically don't have the same datasets and load.

Java APM tools typically use the Java Agent profiler method but with different instrumentation rules to allow them to run without affecting production performance. The trick with these profilers is to provide the right information in a smart way to not take up CPU cycles.

Why Are Some Java Profilers So Expensive?

XRebel is a cool tool, but it costs \$365 a year. Stackify Prefix is free and provides much of the same functionality.

The biggest problem with APM solutions is definitely their pricing. They have traditionally been so expensive that only the largest enterprises could afford them. It doesn't make a lot of sense to spend \$100 a month on a server at Azure or AWS and then spend another \$200 a month for a product like New Relic.

Monitoring tools shouldn't cost more than the servers! Both Prefix and Retrace have profiling functionality and are incredibly affordable. Prefix is free for life and Retrace is free for the first two weeks.



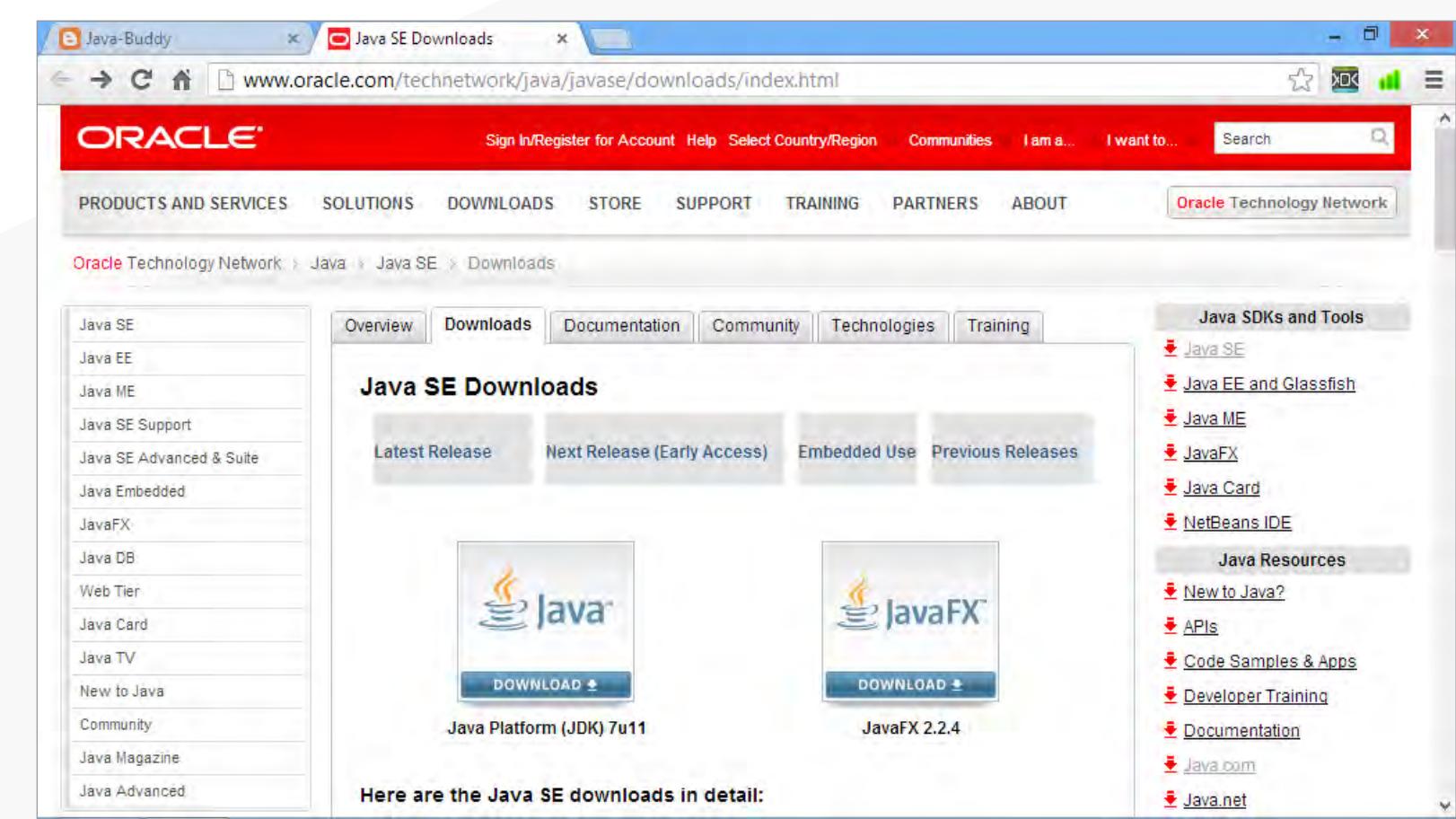
the
TOOLS

Java Development

JDK

Java developers need development tools like Oracle's Java Development Kit to develop and deploy Java applications on desktops, servers, and embedded environments. JDK gives users enterprise-level features that minimize the costs of deployment maintenance of their Java-based IT Environment.

For new and experienced developers, this tool makes Java incredibly easy. Included in the kit is the Java Runtime Environment, the Java compiler, and the Java APIs. JDK provides the rich user interface, performance, versatility, portability, and security that today's developers want and need. Devs also reap the benefits of the Java SE community, such as opportunities for collaboration and early feedback from developers across the globe.



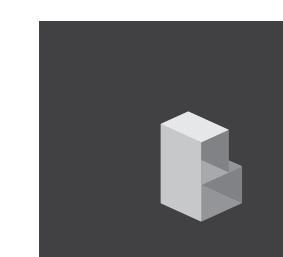
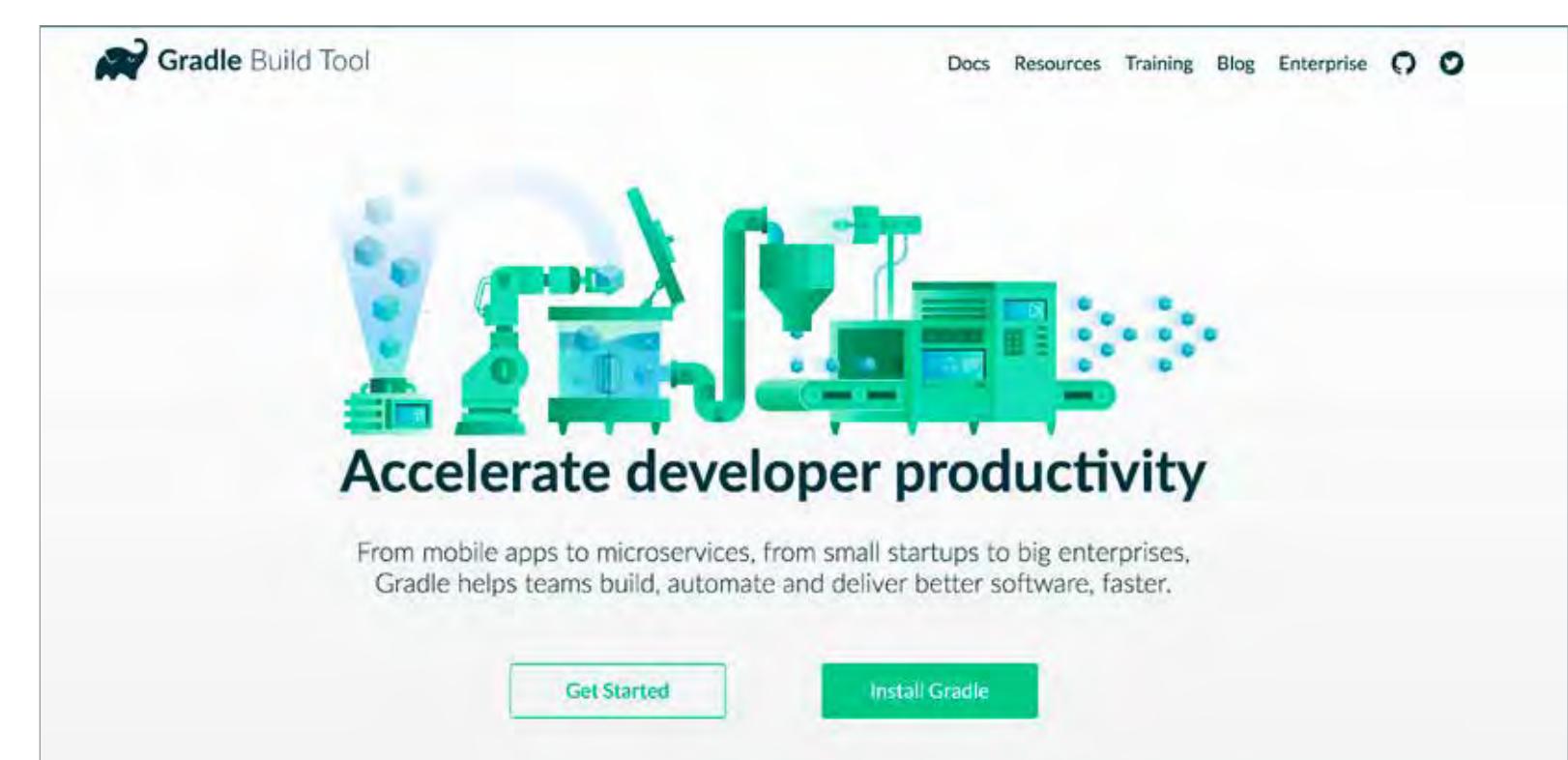
Eclipse

For developers looking for assistance in code completion, refactoring, and syntax checking, Eclipse is the tool for you. Eclipse provides Integrated Development Environments (IDEs) and platforms for nearly every language and architecture. With a Java Development Tools project, Eclipse provides a range of useful plugins to help develop all kinds of Java applications. It's famous for its Java IDE, C/C++, JavaScript, and PHP IDEs, which are built on extensible platforms for creating desktop, Web, and cloud IDEs. For the most extensive collection of add-on tools available, Eclipse is where it's at.

Gradle

Whether you're a small startup or a big enterprise and whether you're building a mobile app or a microservice, Gradle is the productivity tool that helps dev teams build, automate, and deliver software faster. For continuous delivery in Java, C++, Python, or other languages of choice, Gradle allows developer teams to automate everything and deliver faster. Because Gradle's build scripts are written in Groovy and not XML, it's oriented toward being used as a language itself. This means that developer teams can integrate their own abstractions or use the ones that Gradle provides.

Take it from the development teams at LinkedIn, Netflix, and Android: the flexibility to structure your build, monitor and customize configuration, scale up or down depending on your project, and support multi-project builds are just a few of the features and benefits of using Gradle.



Jenkins

The clear leader in Java continuous integration is Jenkins. This flexible plugin system has dominated open source automation for the past five years.

Jenkins can be used as a simple CI server or be turned into a continuous delivery hub for any project. Not only is it a self-contained, ready-to-run program, it can also be easily configured via its web interface, detecting errors on-the-fly and providing built-in support. Hundreds of plugins mean that you can essentially integrate any tool with Jenkins while extending its infinite possibilities via its plugin architecture.



A screenshot of the JUnit 4 documentation website. The header says "JUnit" and "JUnit 4 - Project Documentation". It shows a code snippet for JUnit annotations and a "Let's take a tour" button. The footer includes links for Welcome, Usage and Idioms, and Third-party extensions.

JUnit

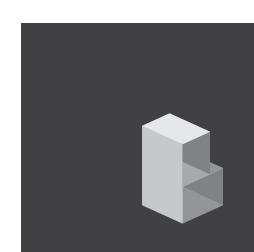
Looking for a unit testing framework that will help you write and run tests? JUnit is the tool for the job. In the world of test-driven development, JUnit promotes the idea of "test first, code later." It allows programmers to test one block of code at a time rather than waiting for the module to be completed before running a test. This check-as-you-go approach increases programmer productivity and the stability of your program code. JUnit also provides annotations to identify test methods and assertions for testing expected results. Who wouldn't want to reduce stress and time spent debugging?

Cobertura

Its name means "coverage," and that's exactly what the Cobertura plugin provides. Cobertura is a free tool that calculates the percentage of code accessed by tests to identify which parts of the Java program are lacking test coverage. While Cobertura is meant to be used with Ant, it also works with the command line and plugins for Maven2 and Eclipse. Tests that use HttpUnit, HtmlUnit, Empirix, and Rational Robot can still be detected by Cobertura.

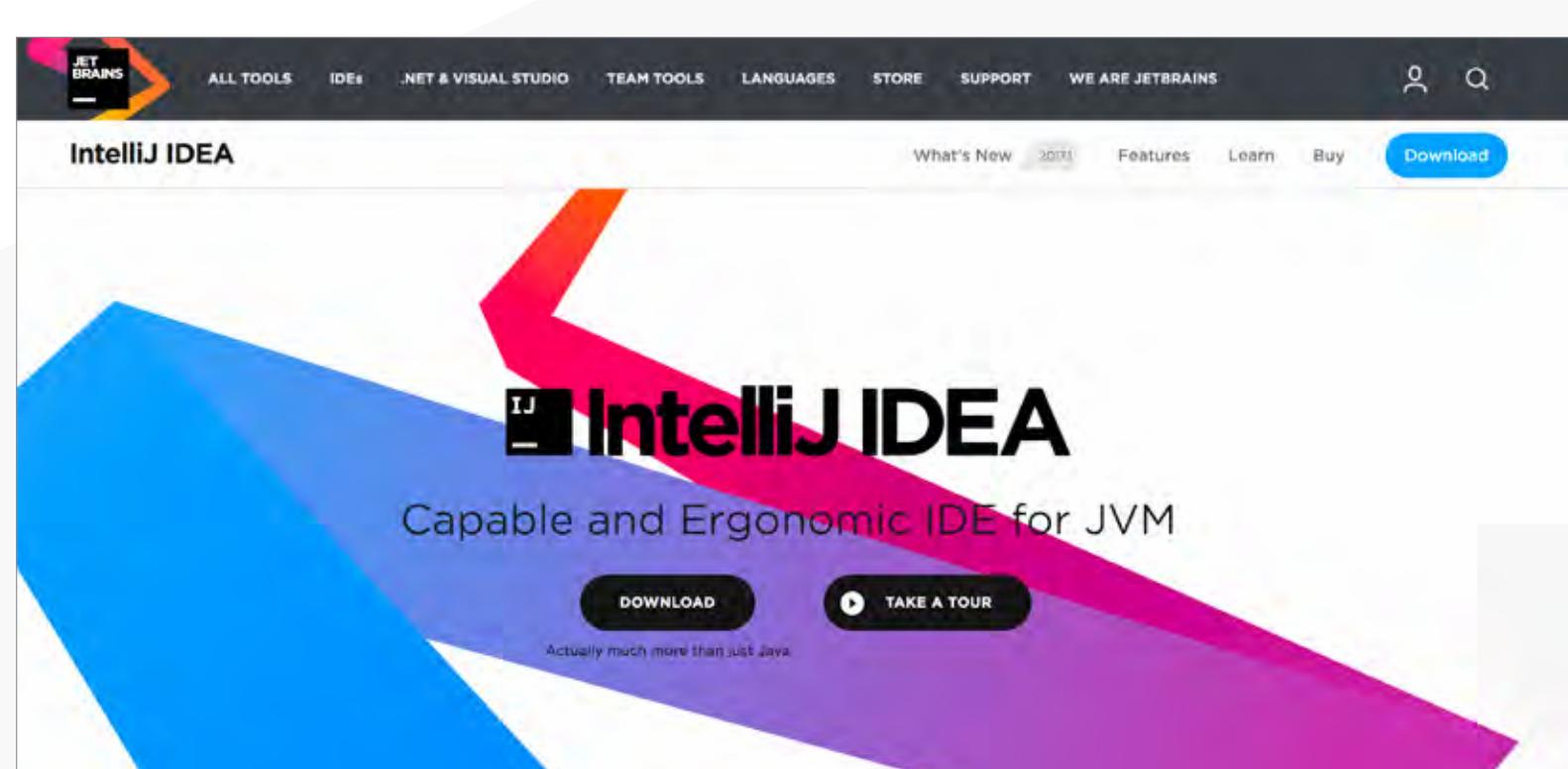
Cobertura's claim to fame is its "pretty output," an easy-to-digest report that translates to less time figuring out where to add test coverage. Cobertura's generated report can also be used to improve efficiency, since an efficient line of code improves the efficiency of an entire application.

A screenshot of the Cobertura 2.1.1 documentation. The header says "Cobertura" and "A code coverage utility for Java". It includes links for "View on GitHub" and "Download latest release". The main content area has sections for "Some Facts" and "Cobertura 2.1.1". It describes Cobertura as a free Java tool for calculating code coverage and provides links to Release Notes, How to contribute, Execute via Ant, Execute via Command Line, Execute via Maven, License, FAQ, Roadmap, and Support.



Groovy

Name a developer who isn't interested in Groovy... we'll wait. Its dynamic runtime nature and powerful static-typing and static compilation capabilities sets Groovy apart from other Java development platforms. Boasting a flat learning curve and concise, easy-to-learn syntax, Groovy is aimed at effortlessly improving developer productivity. Its powerful features include closures, builders, runtime and compile time meta programming, functional programming, type interference, and static compilation. It integrates with any Java program and immediately delivers its powerful features to your application.



IntelliJ IDEA

Every minute spent in the flow is a good minute. Minutes spent fixing a broken flow? Not so much. You don't want to spend your precious dev time examining code and making connections, and with IntelliJ IDEA, you don't have to.

IntelliJ IDEA analyzes code and looks for connections across all project files and languages, providing information for in depth coding assistance, quick navigation, clever error analysis, and refactorings. Save time and maximize productivity with IntelliJ IDEA's editor-centric environment, shortcuts for (nearly) everything, ergonomic user interface, and an inline debugger. Other tools' code completion features suggest names of classes, methods fields, and keywords. IntelliJ IDEA suggests only those types that are expected in the current context. What's not to love?



Retrace

We're try-it-before-you-buy-it kinda people, too. Lucky for you, you can play around in our Sandbox and try Retrace right now.

Check it out!



App Performance

VisualVM

Getting visual is easy with Oracle's VisualVM, an all-in-one Java troubleshooting tool that integrates commandline JDK tools and lightweight profiling capabilities. With JavaVM, you can view detailed information about Java applications while they are running on a Java Virtual Machine. VisualVM monitors and troubleshoots applications running on Java 1.4+ from many vendors using various technologies. It's great for displaying local and remote Java processes, displaying process configuration and environment, monitoring process performance and memory, visualizing process threads, analyzing core dumps, and much more.



A screenshot of the Apache JMeter download page. The header features the Apache Software Foundation logo and the JMeter logo. The main content area is titled "Download Apache JMeter". It includes social sharing buttons for Twitter and GitHub. A note about file integrity and mirrors is present. The "Apache JMeter 3.1 (Requires Java 7 or later)" section is highlighted with a yellow underline. Below it, there are sections for "Binaries" and a download link: "apache-jmeter-3.1.tgz.msf5.sha1". The left sidebar contains links for About, Download, Documentation, and Tutorials.

JMeter

If load testing was an Olympic sport, JMeter would win the gold. Use it to test static or dynamic resources on your web applications, especially when you need to simulate a heavy load on a server, group of servers, network or object to test its strength or to analyze overall performance under different load types. While the learning curve for JMeter's advanced features are quite steep, first-time users can complete a basic performance test in 20 minutes. A bonus feature is JMeter's strong and wide community of developers. The 'jmeter' tag on StackOverflow is full of questions answered by JMeter's loyal users.

Maven

Inspired by a Yiddish word meaning "one who understands," Maven makes the build process easy for devs by providing a uniform build system and quality project information. Maven allows developers to comprehend the complete state of a development effort in the shortest period of time. You'll still need to know about the underlying mechanisms, but you'll be shielded from the unnecessary details. Information that is generated from your project's sources can include cross-referenced sources, mailing lists, dependency lists, and unit testing reports. What are you waiting for? Go be a dev maven.

A screenshot of the Apache Maven Project download page. The header features the Apache Software Foundation logo and the Maven logo. The main content area is titled "Downloading Apache Maven 3.3.9". It includes a note about mirrors and a "System Requirements" section. The requirements table specifies: Java Development Kit (JDK) 1.7 or above, No minimum requirement for Memory, and Approximately 10MB required for the Maven installation itself. The footer contains a small image of a 3D cube icon.

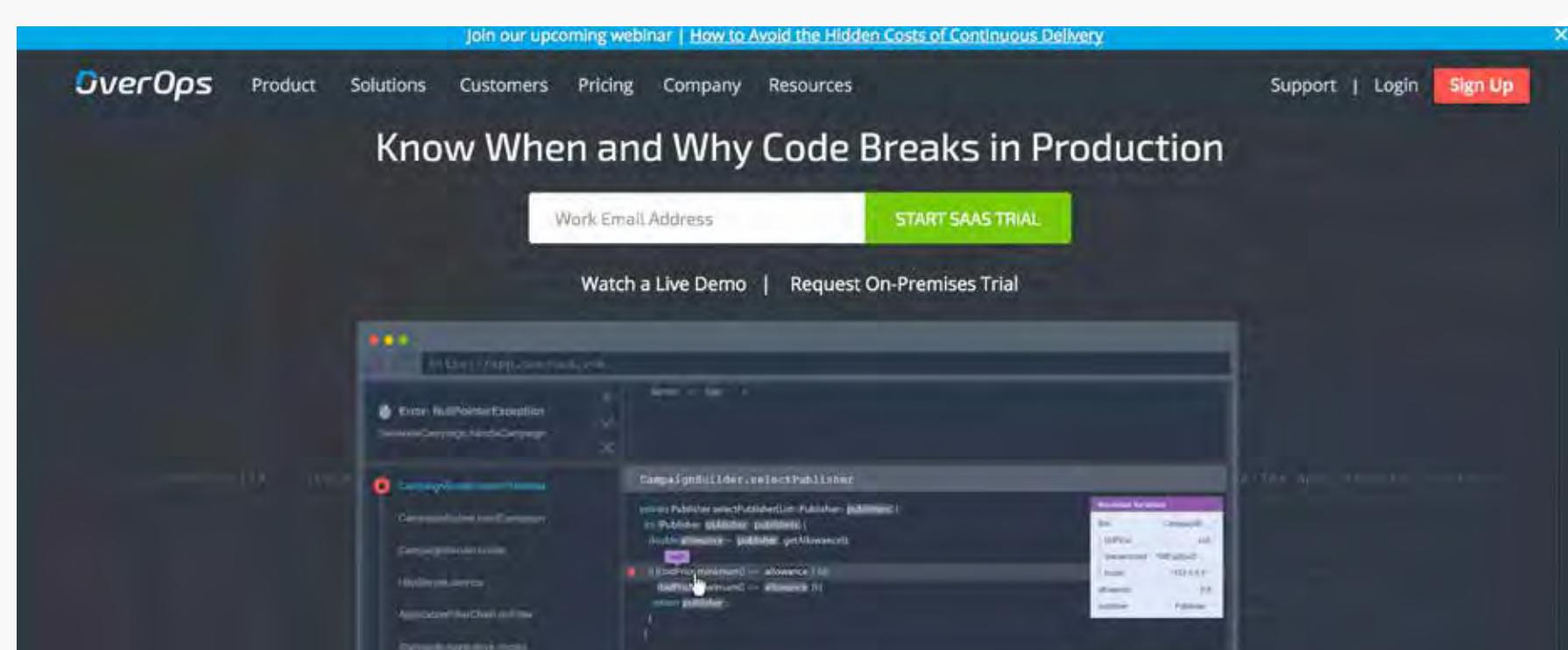
Errors and Logs Tools

FindBugs

Busy developers don't have time to waste chasing bugs. FindBugs is a free, easy-to-use tool that uses static analysis to search your Java bytecode for patterns that suggest the presence of an error. Such bug patterns include difficult language features, misunderstood API methods and post-maintenance invariants, and typos—all of which can mean a pesky bug is hiding out in your code. To help you prioritize, FindBugs ranks the potential severity and impact of errors from "of concern" to "scariest." While its accuracy rate isn't perfect, FindBugs is able to correctly notify you of errors over 50% of the time.



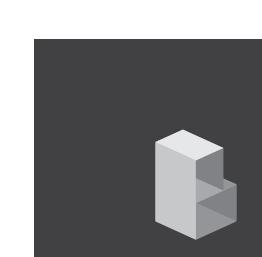
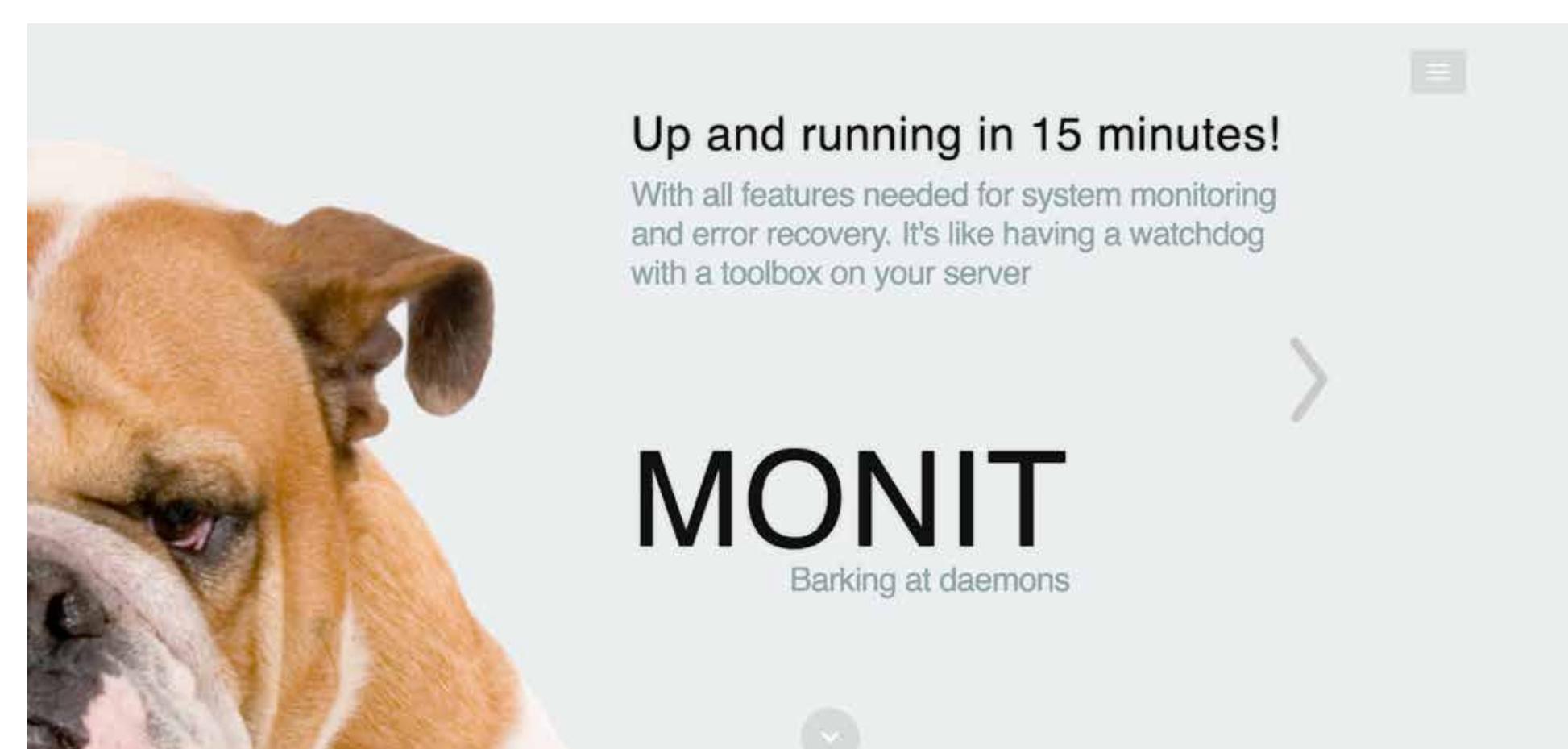
OverOps



When your code breaks, your first reaction (after cursing it for breaking in the first place) is to ask "when?" and "why?" OverOps can't curse your code for you, but it can answer those all-important questions. This lightweight macro-agent detects when your code breaks, notifying your team in real time about where the break happened and the variable state that caused it. No more time wasted scanning logs and no more clients upset by product delays. And though it runs continuously, OverOps won't slow down your stack. The tool uses just 1% CPU and requires no GC overhead.

Monit

Error notifications are great, but what about a tool that can fix the errors for you, too? Enter Monit, a "watchdog" that constantly monitors and manages your Unix systems, conducting automatic maintenance and repairs when errors pop up. Monit also monitors process characteristics so you always know how much memory or CPU a process is using. The tool works across your Unix framework, from files, directories, and filesystems on localhost to programs, scripts, daemon processes, and cloud connections. Monit is an extra layer of security, designed to utilize your existing infrastructure without depending on additional plugins or special libraries.



Log4J

As part of the development cycle, logging can help you think critically about errors and solve them in a way that improves the code while providing important context for why the debugging was required in the first place. And when it comes to logging your Java code, your best bet is to use Log4j, now in its second iteration. Log4j is the most widely used logger, and for good reason. The API is separate from the implementation so you always know which classes and methods you can use moving forward. It also contains next-generation asynchronous loggers that use a built-in LMAX Disruptor Library to improve application performance and get you back on track faster. While Log4j 2 is not backwards compatible with the 1.x versions, adapters are available.

The screenshot shows the official Apache Log4j 2.14 Logging Services website. At the top right is the LOG4J 2.14 logo. The main navigation bar includes links for 'Logging Wiki', 'Apache', 'Logging Services', 'Soner', and 'GitHub'. The left sidebar has sections for 'APACHE LOG4J 2' (About, Download, JavaDoc, Maven, Ivy, Gradle Artifacts, Runtime Dependencies, ChangeLog, FAQ), 'FOR CONTRIBUTORS' (Building Log4j from Source, Guidelines, Style Guide), and 'MANUAL' (Introduction, Architecture, Log4j 1.x Migration, API, Configuration). The central content area features a 'Welcome to Log4j 2!' heading and an 'Introduction' section with text about the history and benefits of Log4j. A note at the bottom discusses the choice between using debuggers and logging statements.

Retrace

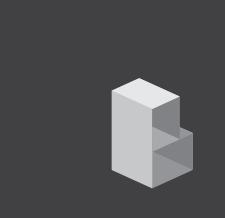
We don't know about you, but our ideal debugging tool is one that works seamlessly with our existing processes and gives us everything we need to work better, faster, and more efficiently. And because we couldn't find a tool that perfectly met our standards, we went ahead and built one of our own. Retrace is a SaaS-based APM designed for devs who want to work smarter. A single pane offers everything you need to monitor your code, including performance and metrics data, integrated errors, and application and server logs. You'll have everything in one place so you can easily focus your attention where it's needed, when it's needed.



Retrace

Free is awesome, especially when it helps you as much as Retrace does. We're sharing the goods for free for 14 days. Check it out!

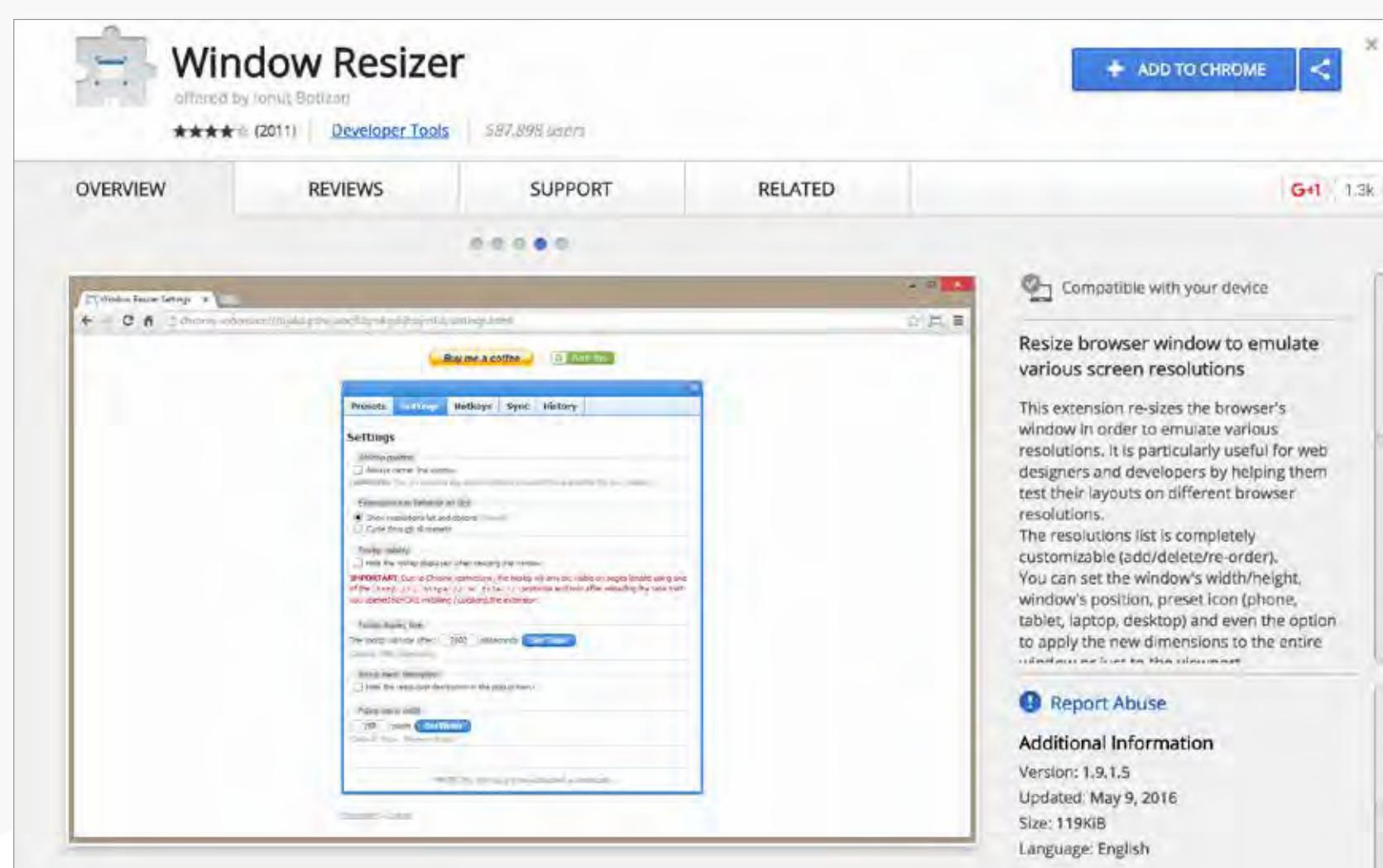
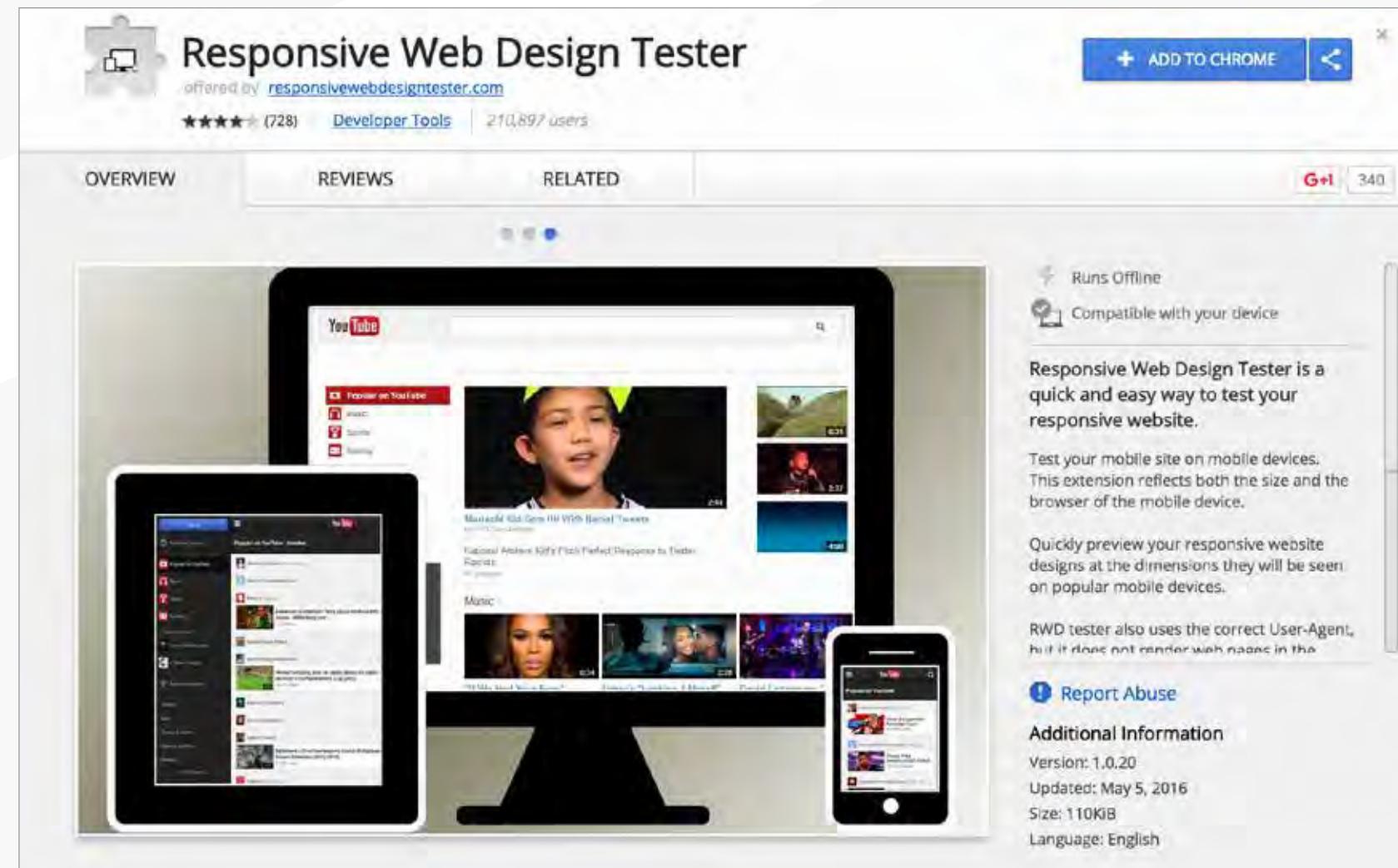
Try it now!



Web Extension Tools

Responsive Web Design Tester

We live in a mobile world, and your work needs to display as perfectly on your users' mobile devices as it does on their desktops. Responsive Web Design Tester is a Google Chrome add-on that quickly and easily allows you to test your responsive website to see exactly how it will appear on mobile devices. The tool takes into account both the size and browser of popular devices, including iPads, iPhones, and Androids, so you can see the dimensions of your responsive website exactly as they'll appear to various users. Not finding a device that suits your needs? Add your own device and see how your design appears on there.

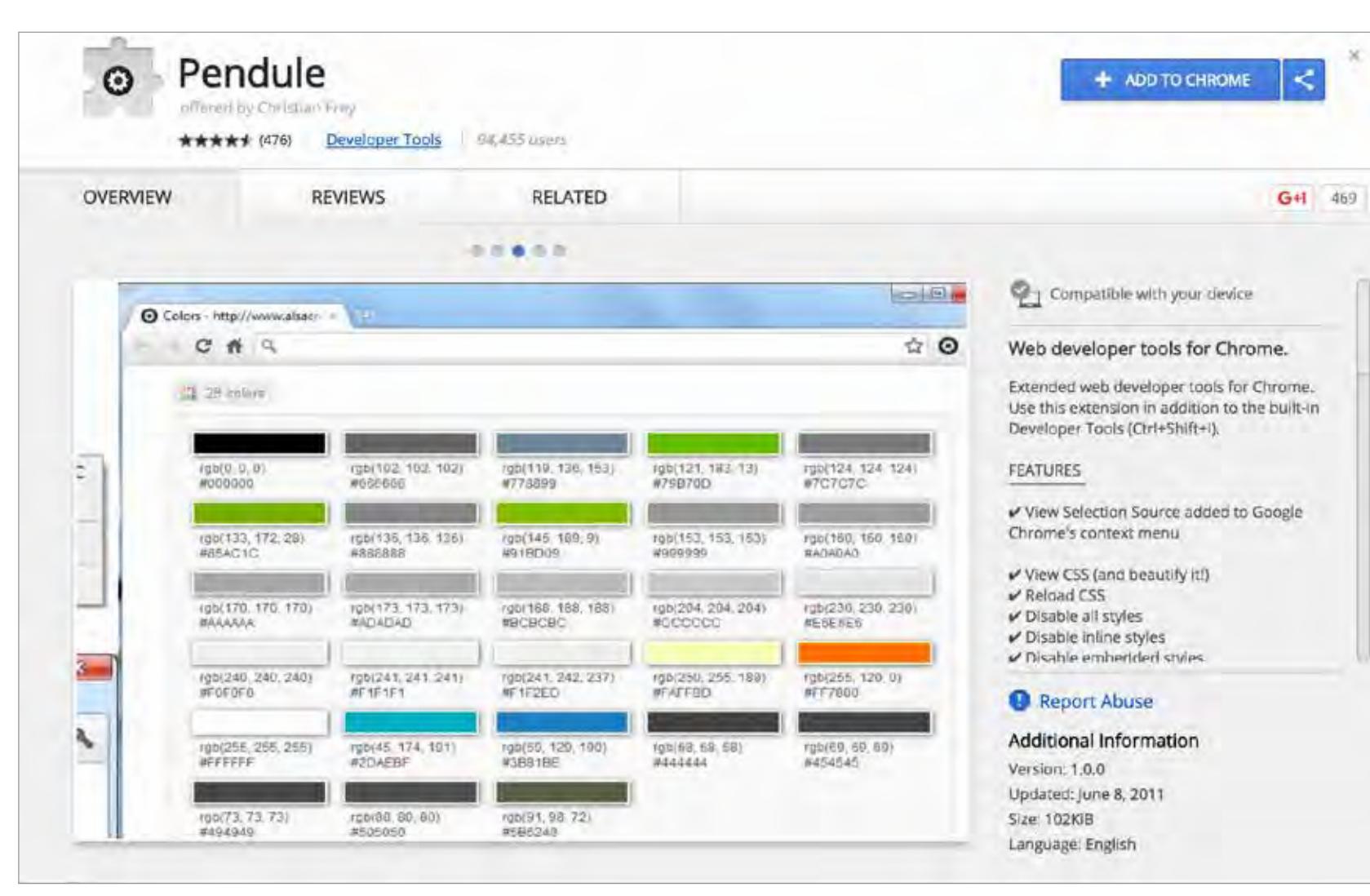


Window Resizer

You know how your design looks on your own screen, but that doesn't tell you much about how it will appear to everybody else. Window Resizer is a Google add-on that enables you to test your layout on different, customized browser resolutions and sizes. You can resize the browser window to emulate various screen resolutions of your choosing, setting the window's width, height, position, and preset icon to exactly the dimensions you'd like to test. And thanks to customizable global key shortcuts, you can export settings and easily import them onto other computers. It's a great tool for developers and designers alike.

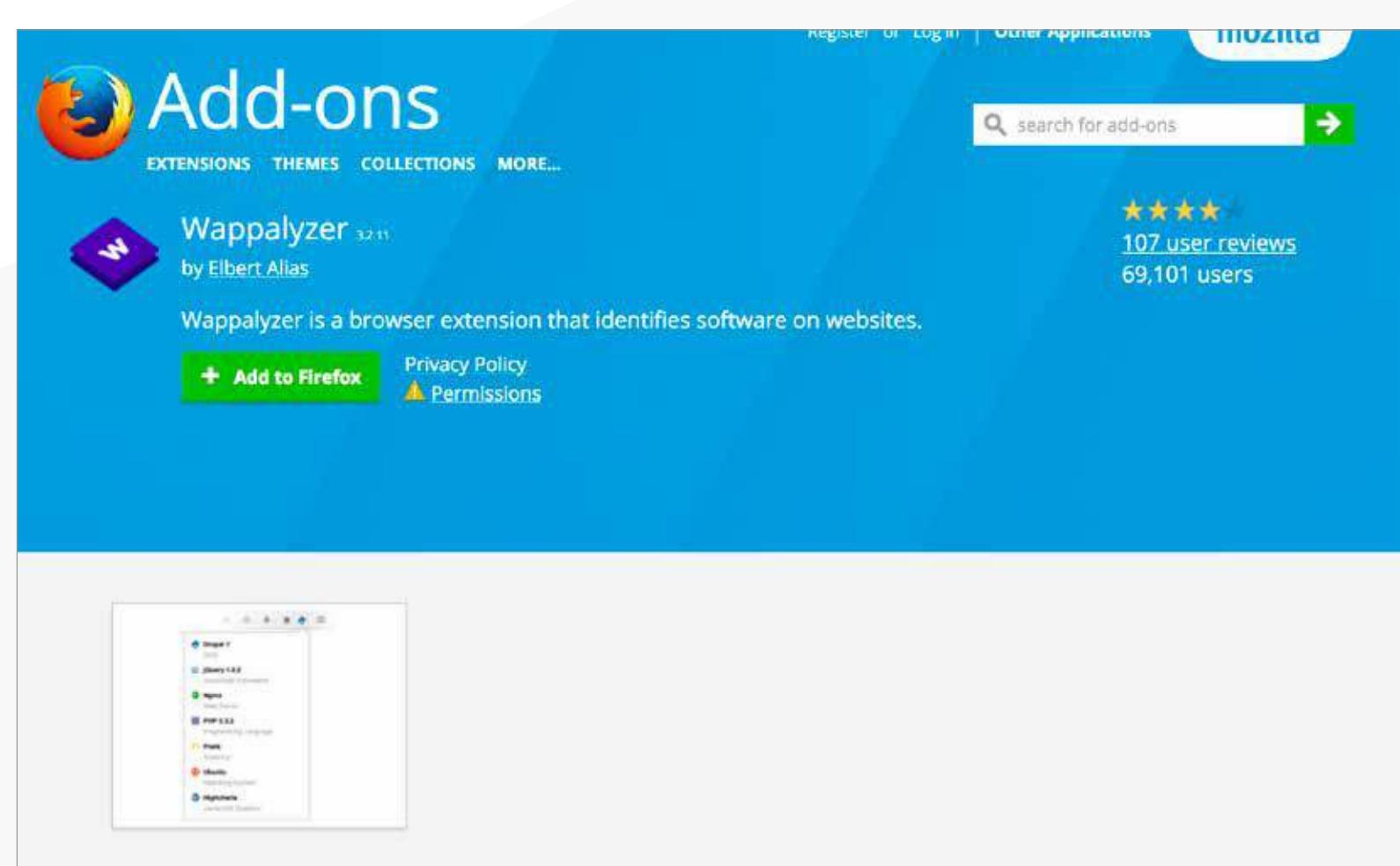
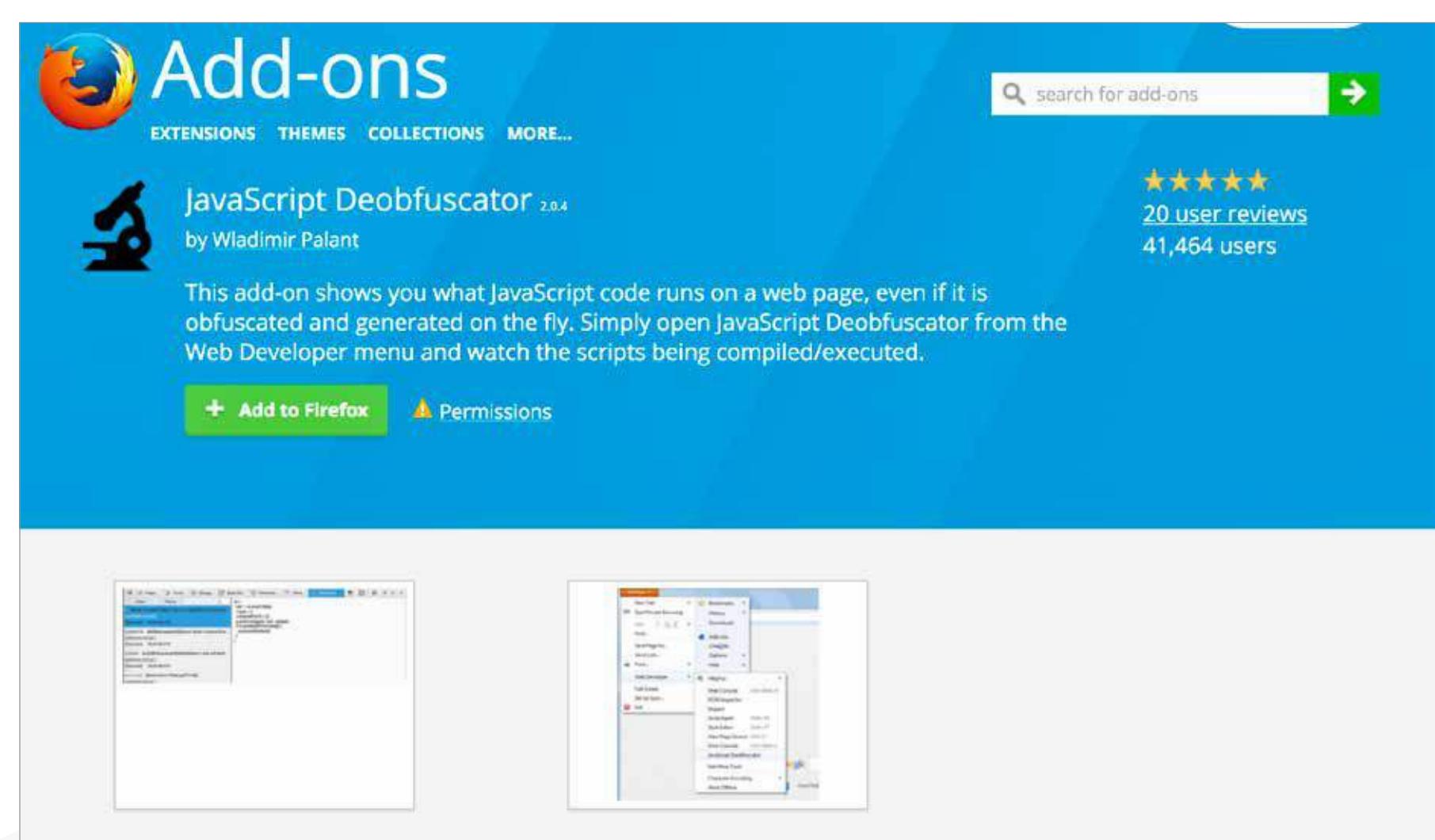
Pendule

Chances are you've already got a few Chrome developer tools that you rely on. Pendule helps you make them even more useful. This Chrome add-on extends Chrome's built-in developer tools, making them more customizable than ever. View, reload, and beautify CSS, disable particular styles and colors and quickly see when they've already been used, view image information (or hide images entirely), view JavaScript and generated sources, show passwords, and more. To help you perfect your design for all devices, Pendule also allows you to adjust your browser to various sizes. Complete with an intuitive UI, you'll never know how you managed web design without it.



JavaScript Deobfuscator

Besides being fun to say, JavaScript Deobfuscator is a helpful Firefox add-on that shows you what JavaScript code is running on a particular web page, even if it's obscure, unintelligible, or generated on the fly. View the complete scripts that the JavaScript engine is compiling and executing as they occur, regardless of any special tricks put in place by the web designer to prevent you from doing so. Reload pages to see what's happening on the backend during the reload process, or click around and see what codes are triggered. JavaScript Deobfuscator integrates right into your Firefox Developer Tools, allowing you to open it directly from the Web Developer menu.



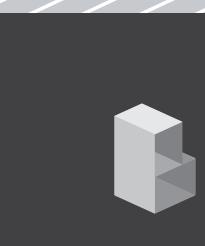
Wappalyzer

Wappalyzer, available as an add-on for Firefox and Chrome, is a browser extension that allows you to see what software websites are using. It recognizes over 1,000 web applications in 52 categories, including content management systems, JavaScript frameworks, eCommerce platforms, database managers, programming languages, error trackers, web server extensions, and more. It's a valuable tool for seeing deep into the inner workings of successful websites, especially if you're in the process of laying the foundation for your own. Note: Wappalyzer gathers data on your app usage. Make sure to manually opt out if you don't want them collecting data from you.



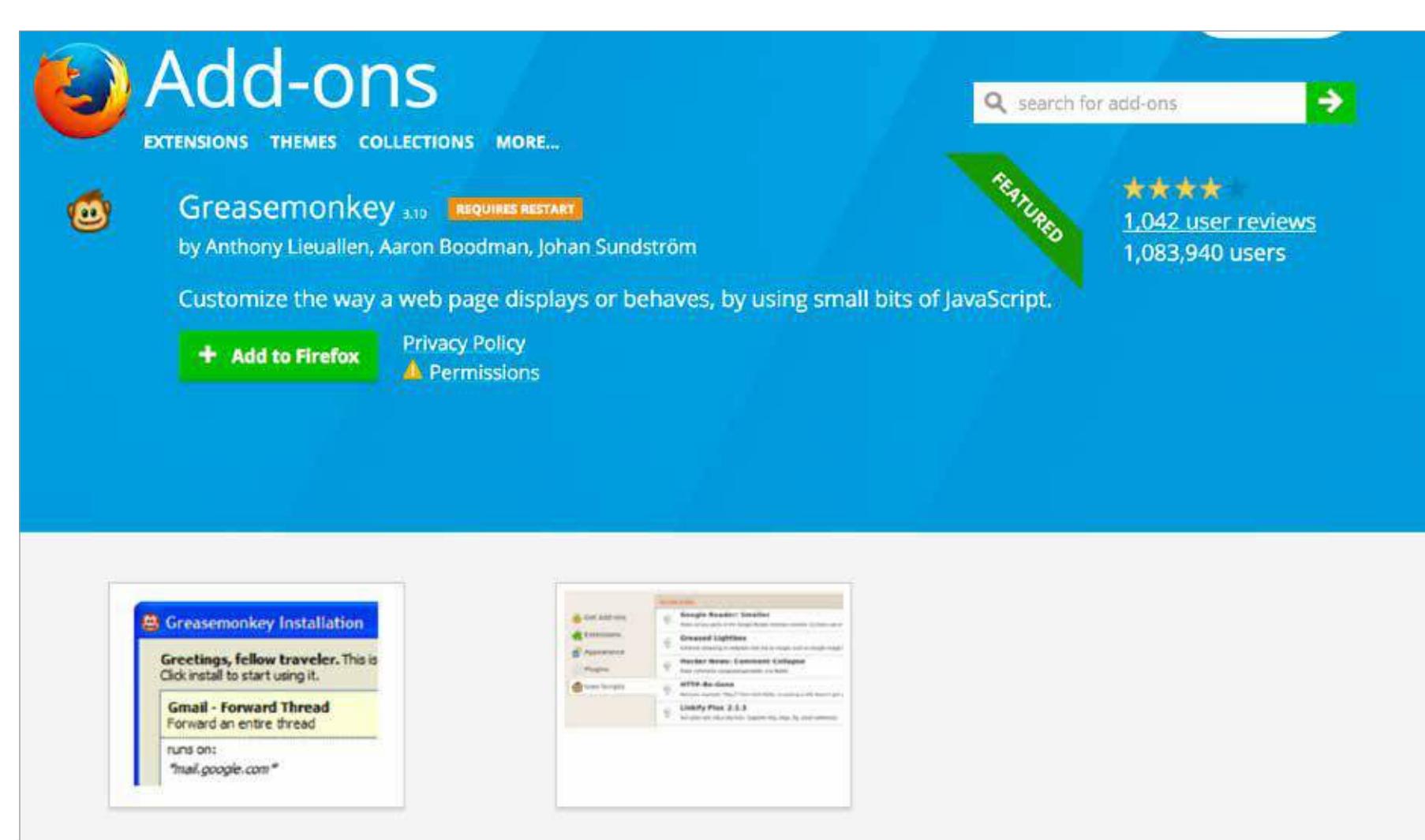
Retrace = rapid app performance improvement = a greater visibility and access to code once it's been deployed to a server. See what the hype is about and play around on this live demo!

[View the demo](#)

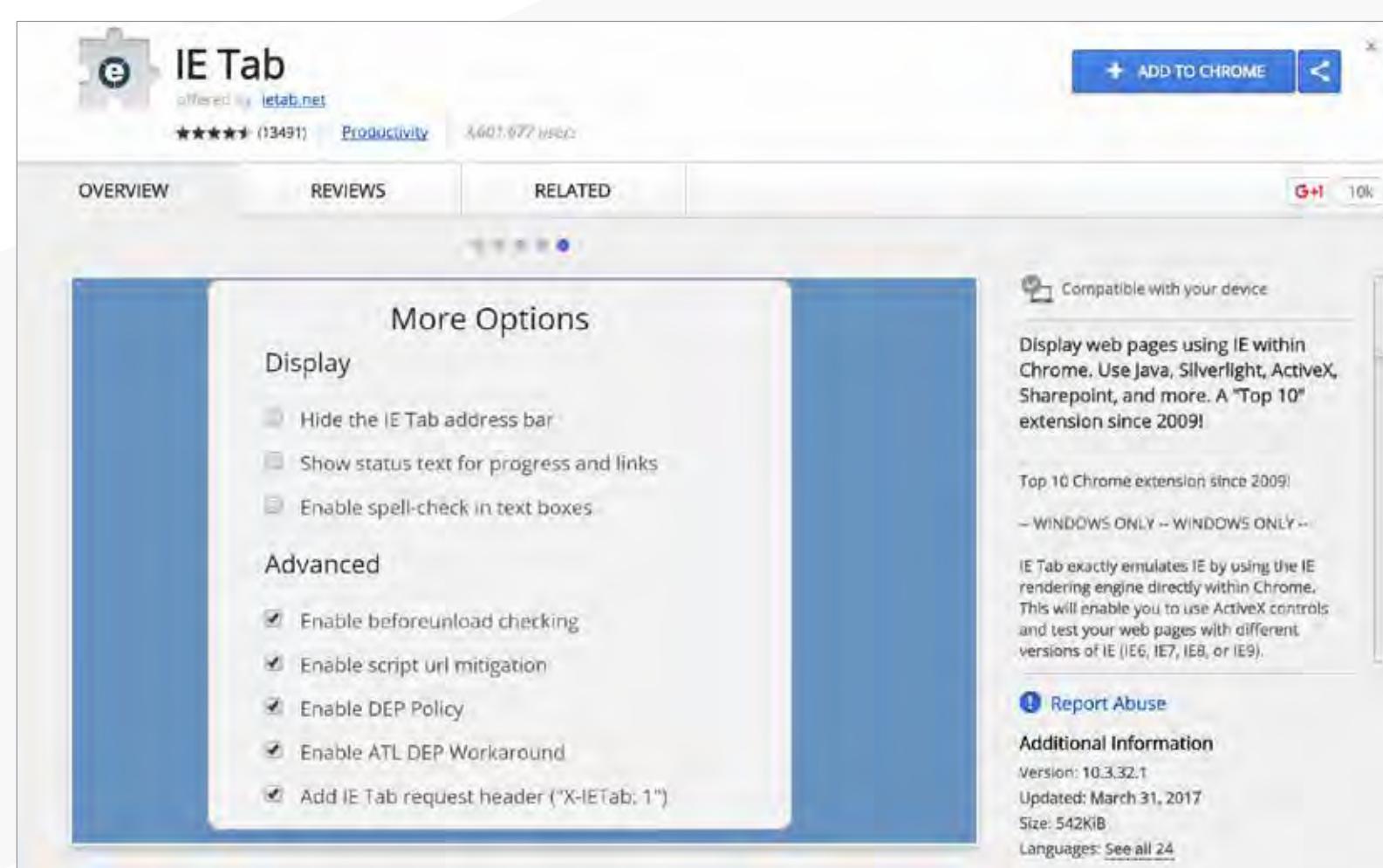


Greasemonkey

Ever wish you could rule over the Internet? Well, Greasemonkey might be as close as you're going to get. The Firefox add-on uses small bits of JavaScript (available in-app, but you can create your own, too) to let you customize how web pages display and behave on your computer. Change a site's appearance, add new functions, fix rendering bugs, improve performance, combine data from multiple web pages, or just search through Greasemonkey's extensive list of user-created JavaScripts to see what else is available. The changes you make to a site will be executed every time you visit, truly rendering you ruler of your Internet kingdom.



IE Tab



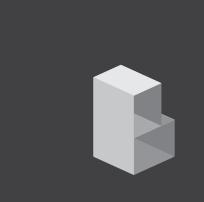
There's a reason that IE Tab has been in the top ten of all Chrome extensions since 2009. The add-on allows Windows users to display web pages using IE within Chrome, enabling easy testing of web pages and the use of Java, Silverlight, and ActiveX controls. IE Tab uses the IE rendering engine within Chrome to perfectly emulate the IE browser, a valuable tool for developers building across multiple browsers. Edit Sharepoint documents instead of viewing them in read-only format, and create a standby list of URLs that will automatically open within the extension for IE viewing. IE Tab is also available as an extension for Firefox and SeaMonkey users.



Retrace

Improved application performance on QA/test and production servers will have you enjoying FREEdom for the next 14 days. Go ahead, save time, and have a beer on us.

Try it now!



Messaging Distribution Tools

Hazelcast

Hazelcast is an open-source in-memory data grid solution based in Java. It stores frequently accessed data across a scalable grid, enabling networks of machines to accelerate application performance by clustering and pooling their memory and processors. Use for caching, NoSQL, web session clustering, application scaling, and more. An open binary client protocol supports APIs for any binary primary language, including Java, .NET, C++, Python, Scala, Node.js, and Clojure. It's a great organizational tool for developer teams, especially in use as an underlying system upon which to build higher level features. Created in 2009, its most recent iteration, Hazelcast 3.8, was just released in March of this year.



The screenshot shows the Apache ActiveMQ website. At the top, there's a navigation bar with links for Index, Download, JavaDocs, More..., Source, Forums, and Support. Below the navigation is a banner with the text "Download ActiveMQ 5.14.4 Today!". To the left of the banner is a small image of the ActiveMQ software box. On the right side of the banner is a sidebar with links for Overview, Features, Sub Projects, Community, and Search. The main content area contains information about ActiveMQ's features, such as support for various clients and protocols, and its use as an in-memory message service provider.

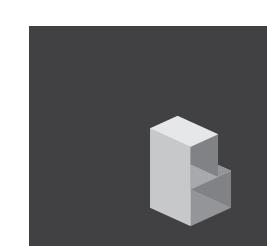
ActiveMQ

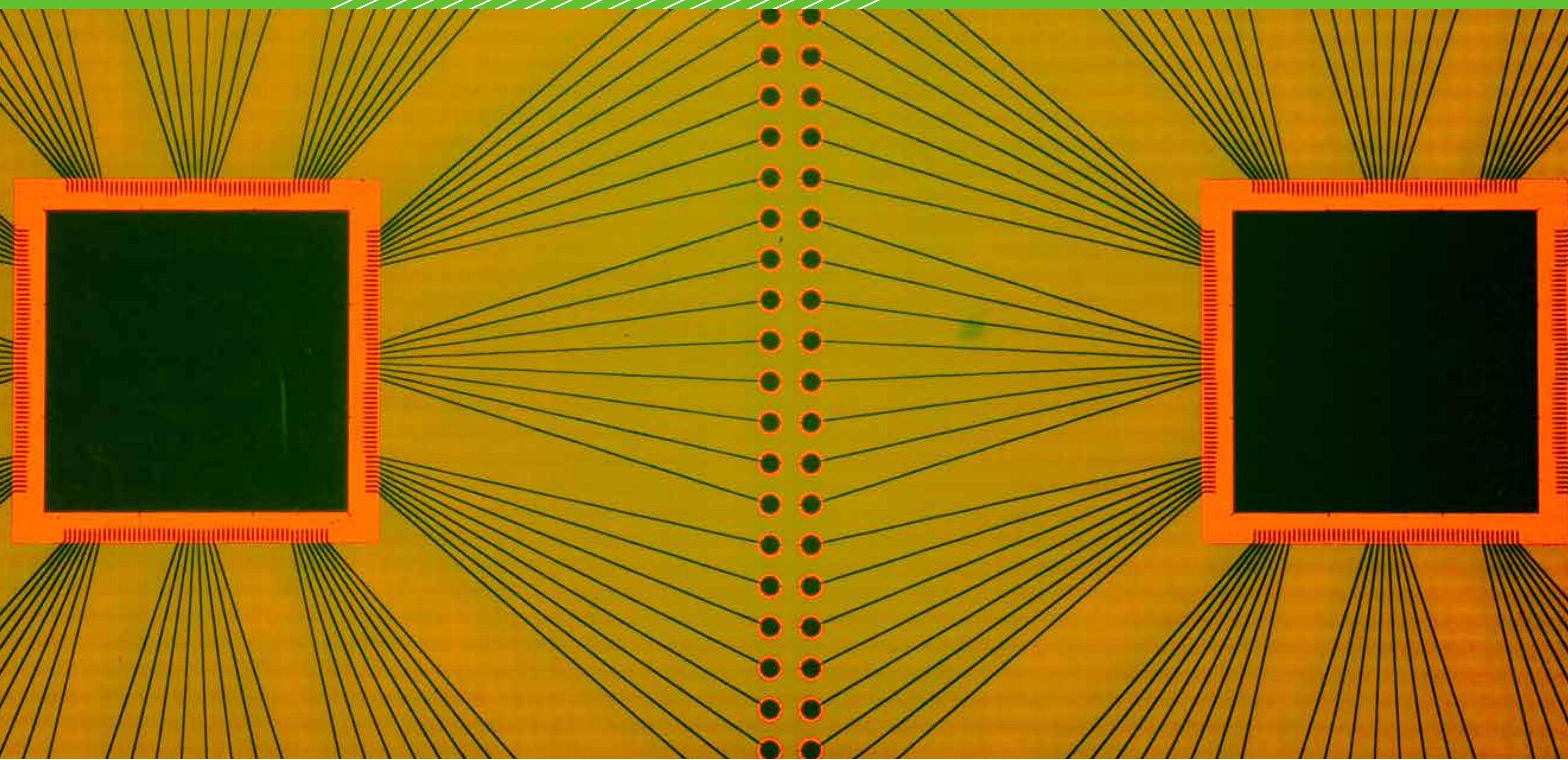
Designed for high performance clustering, client-server, and peer-based communication, Apache ActiveMQ is a leader in the open source messaging and integration patterns arenas. The message broker supports cross language clients and protocols across a variety of programming languages, including Java, C, C++, C#, Ruby, PHP, Python, and Perl. Use it as an in-memory Java message service provider or for unit testing JMS. Because messages are shared in a common format, integration between different applications and processes is relatively seamless. Enabling clear communication between multiple clients and servers is critical for developer teams, and ActiveMQ does it with ease and flexibility.

Camel

The idea behind Apache Camel is that integration should be easy and more accessible for developers. It works by allowing you to define routing and mediation rules in a variety of domain-specific languages, connect to a variety of transports and APIs, and implement all the widely-used Enterprise Integration Patterns. Camel uses domain-specific language to support routing rules using regular Java code, without using large amounts of XML configuration files. If you'd like, you can also opt to define your rules in Scala DSL, Spring, or Blueprint. Thanks to a small library with minimal dependencies, Camel is easy to embed into any Java application you're working on.

The screenshot shows the Apache Camel website. At the top, there's a navigation bar with links for Home, Download, Getting Started, and FAQ. Below the navigation is a banner with the text "Download it Today!" and an image of the Camel software box. To the left of the banner is a sidebar with links for Overview, Documentation, and Search. The main content area contains information about Camel's features, such as its support for various languages and transports, and its use as a routing and mediation engine.





The OOPs Concepts

What Are OOPs Concepts in Java?

At Stackify, we aim to help developers become better developers. Because the foundational concepts in the Java programming language are so important, and because Java is one of the many programming languages and technologies supported by Stackify's leading tools, Retrace and Prefix, we're taking a look at some of the foundational concepts in the Java programming language.

Definition of OOPs Concepts in Java

We know what you're thinking, and in this case, oops doesn't mean a mistake was made. OOPs concepts in Java are the main ideas behind Java's Object Oriented Programming. Grasping them is key to understanding how Java works. Basically, Java OOPs concepts let us create working methods and variables, then re-use all or part of them without compromising security.

List of OOPs Concepts in Java

There are four main OOPs concepts in Java.

- In Java, abstraction means simple things like objects, classes, and variables represent more complex underlying code and data.
- Encapsulation is the practice of keeping fields within a class private, then providing access to them via public methods. This way, we can re-use objects like code components or variables without allowing open access to the data system-wide.
- Inheritance is a special feature of Object Oriented Programming in Java. It lets programmers create new classes that share some of the attributes of existing classes which lets us build on previous work without reinventing the wheel.
- Polymorphism lets programmers use the same word to mean different things in different contexts.

Best Practices for OOPs Concepts in Java

Since the aim of OOPs concepts in Java is to save time without sacrificing security and ease of use, the best practices are all oriented toward advancing that main goal.

- DRY (Don't Repeat Yourself). This is the core concept in Java. You should never have two blocks of identical code in two different places. Instead, have one method you use for different applications.
- If you expect your Java code to change in the future, encapsulate it by making all variables and methods private at the outset. As the code changes, increase access to "protected" as needed, but not too public.
- Another best practice for OOPs concepts in Java is the Single Responsibility Principle. Simply put, a class should always have only one functionality. That way, it can be called and/or extended on its own when new uses arise for it, without causing coupling between different functionalities.
- Make all methods and classes Closed for modification but Open for an extension. That way, tried and tested code can remain static but can be modified to perform new tasks as needed.

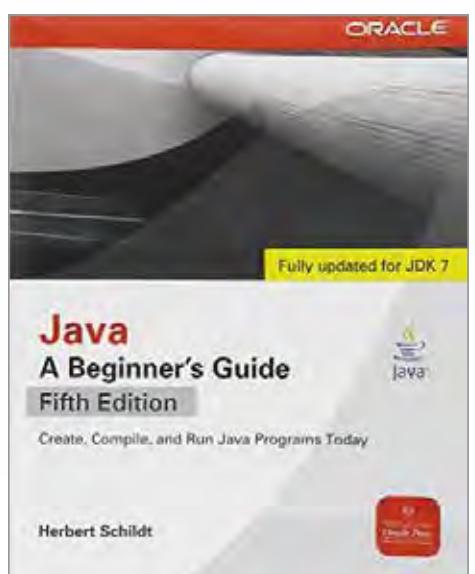
Apply these foundational concepts in your Prefix and Retrace profiling efforts today!



the
APPENDIX

books

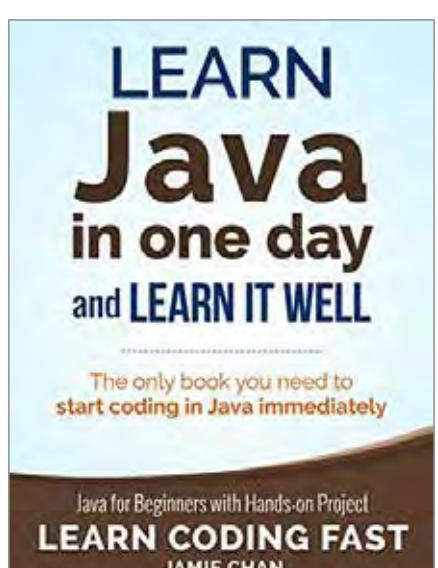
B E G I N N E R



Java: A Beginner's Guide

Java: A Beginner's Guide starts with basics - such as how to compile and run a Java program, keywords, syntax, and the Java language. The book is constructed with added features such as a fast-paced tutorial, 'ask the expert' Q&A, hands-on exercises that show you how to apply the skills, self-test, and an annotated syntax.

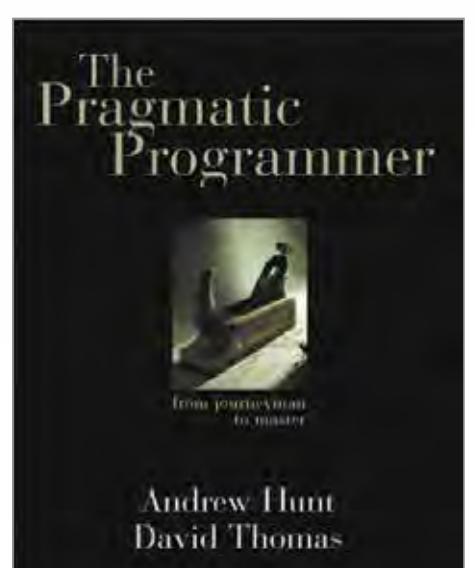
[Beginner]



Java: Learn Java in One Day and Learn It Well. Java for Beginners with Hands-on Project

This book helps readers who are new to computer programming or the Java language. Offers Java for beginners, carefully chosen Java Examples, object-oriented programming concepts, error handling techniques and file handling techniques presented in a to-the-point style and complete with a project to apply the concepts.

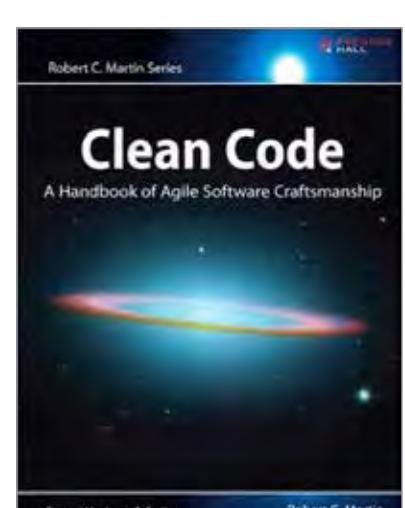
[Beginner]



The Pragmatic Programmer

This dictionary-style book covers topics devs face in their career as a programmer such as personal responsibility, career development, architectural techniques to keep code flexible and easy to adapt and reuse. Throughout this book, readers will examine core processes by transforming a requirement into a working, maintainable code that delights users.

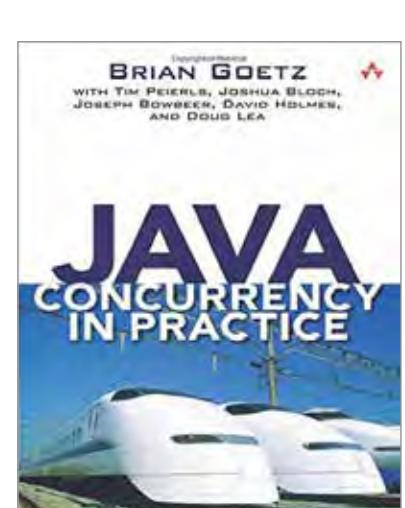
[Journeyman]



Clean Code: A Handbook of Agile Software Craftsmanship

We're all after clean code and this book breaks it down into three sections: principles, patterns and practices of writing clean code, case study exercises in cleaning up code, and the payoff of clean code.

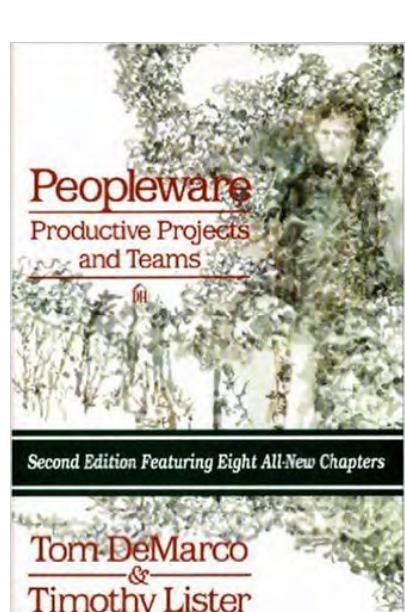
[Journeyman]



Java Concurrency in Practice

For deeper, theoretical underpinnings and concrete techniques for building reliable, scalable applications, *Java Concurrency in Practice* delivers.

[Professional]



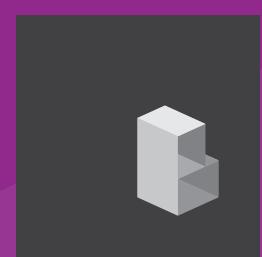
Peopleware: Productive Projects and Teams

Have you ever thought that the major issues of software development are human, not technical? If you're a leader on a software team, this book gives insights on team jelling, work environment, how teams work and the important characteristics of a successful team.

[Professional]

P R O F E S S I O N A L

Websites + blogs



Stackify

Not to brag, but at Stackify, we publish a lot of content. While some of our blog posts are geared to .NET developers, you'll find a healthy dose of Java-related reads.



Arun Gupta

Arun's extensive experience in the Java world shines through on his blog - of course, you'll find information on Java, but you'll also read about leading cross-functional teams to develop and execute strategy, planning and execution of content, marketing campaigns, and programs.



Oracle's Community Space

In this forum-like space, you can engage by asking or answering questions to help other Java developers with Java-related technologies and tools. You can also read the technical news, articles, and blogs.



Ceylon-Lang, Gavin King

Gavin King highlights a variety of topics on his blog - especially his tool Ceylon and its intersections with other tools and languages.



Vanilla Java

This blog doesn't have four million views for nothing! Peter Lawrey helps readers understand how core Java really works to write simpler, faster applications.



JavaWorld

To keep you ahead in the Java development world, Java World publishes standard white papers, tutorials, and career advice. Even better, the site also hosts a number of blogs and columns through which some of the world's top experts on Java share tips and insights.



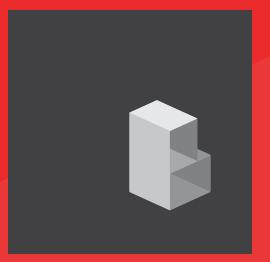
Java Code Geeks

Geek out with a blog that speaks to who you are. The Java Code Geeks blog provides devs with articles, step-by-step guides, reviews, and code snippets from top-notch specialists. Aside from Java, the site also provides useful content on software development, the Agile framework and Android.



InfoQ's Java Section

InfoQ's Java section serves up in-house-produced and well-curated news, articles, and multimedia interviews on all things Java. You can also search for free, industry-leading, publications such as reports, books, and magazines.



youtube channels

The screenshot shows the homepage of the Code School YouTube channel. It features a colorful cityscape banner at the top. Below it, there's a video thumbnail for "What is Code School?" with 50,844 views. A "Subscribe" button shows 28,927 subscribers. To the right, there's a sidebar with "Related channels" including LearnCode.academy, Traversy Media, freeCodeCamp, The Net Ninja, thenewboston, and Derek Banas.

Code School

Code School, an online learning destination for existing and aspiring developers, teaches through entertaining content and over 55 courses covering Ruby, JavaScript, HTML/CSS, Python, iOS, Git, databases, and more.

The screenshot shows the homepage of the Derek Banas YouTube channel. It features a background image of various programming-related icons. Below it, there's a video thumbnail for "Erlang Tutorial" with 7,294 views. A "Subscribe" button shows 597,142 subscribers. To the right, there's a sidebar with "Related channels" including thenewboston, ProgrammingKnowledge, Traversy Media, LinusTechTips, Cave of Programming, and The Coding Train.

Derek Banas

Derek Banas produces original videos and tutorials on visitor requests. With new content all the time, Derek uploads programming videos every Wednesday and Saturday morning and live streams on Monday, Tuesday, Thursday and Friday evenings.

The screenshot shows the homepage of the thenewboston YouTube channel. It features a large banner with the text "THE NEW BOSTON" and "LEARN FOR FREE". Below it, there's a video thumbnail for "Angular 2 for Beginners - Tutorial 1 - Getting Started" with 431,721 views. A "Subscribe" button shows 1,546,440 subscribers. To the right, there's a sidebar with "Featured Channels" including Bucky Roberts, Codecourse, sentdex, mybringback, ITzAdamSX, and Sam McAnally.

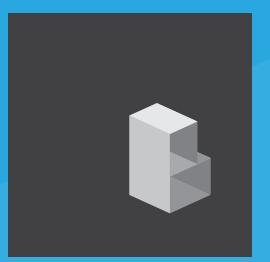
thenewboston

For world's largest (and sweetest) collection of free video tutorials on computer programming, web design, game development, and more, thenewboston has your back.

The screenshot shows the homepage of the Codecourse YouTube channel. It features a blue header with the text "let's build something awesome.". Below it, there's a video thumbnail for "Out now! Huge Classified Ads Course with Laravel" with 15,541 views. A "Subscribe" button shows 250,561 subscribers. To the right, there's a sidebar with "Related channels" including thenewboston, Traversy Media, howCode, LearnCode.academy, Mindspace, and Derek Banas.

Codecourse

Codecourse is video content that inspires web development while teaching almost 250,000 subscribers to code.



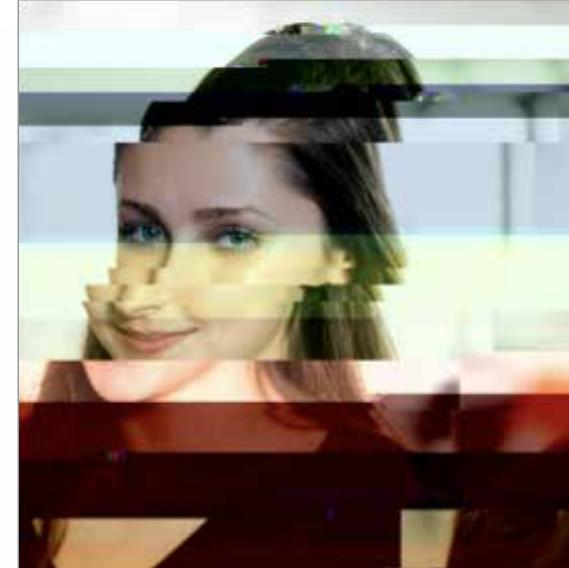
twitter influencers



Nick Craver

@Nick_Craver

Nick Craver is an architecture lead, developer, site reliability engineer for Stack Exchange. He'd probably appreciate a thank you for keeping Stack Overflow up and running.



Ana Noemi

@anoemi

Ana Noemi is a project manager at Stack Overflow. She assists folks in learning how to use software and helping them learn to work together to build something awesome.



John Resig

@jeresig

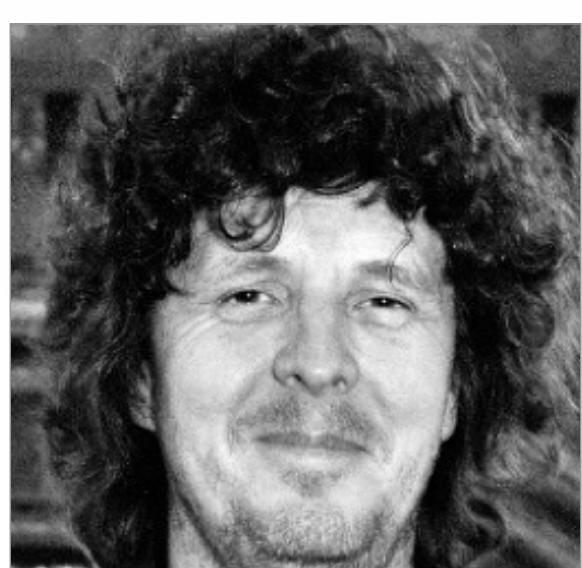
John Resig is an American software engineer and entrepreneur. He's most notable for being the creator and developer of jQuery.



Arun Gupta

@arungupta

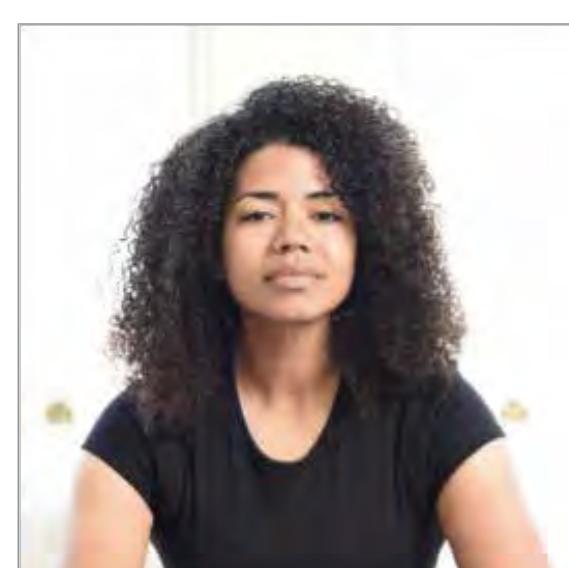
Arun Gupta is the VP of developer advocacy at Couchbase and the founder of Devoxx4Kids USA. He has built and led developer communities for 10+ years at Sun, Oracle, and Red Hat.



Rich Hickey

@richhickey

Creator of the Clojure language, a functional language that runs on the JVM and fully interacts with Java.



A. Nelson-Hornstein

@ashleynh

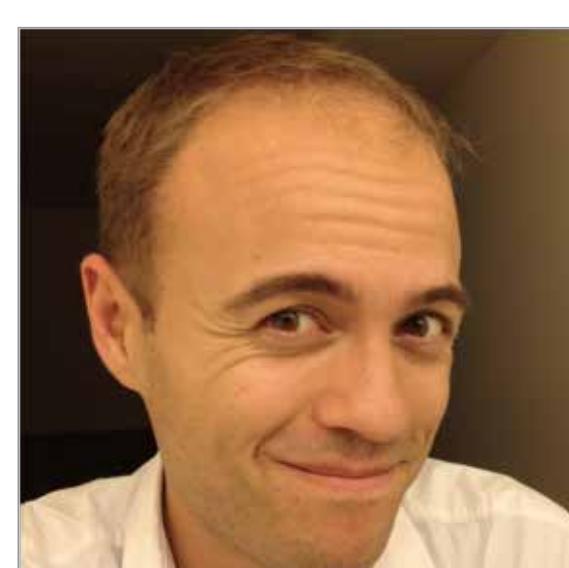
Previously a developer for Apple and Dropbox, Ashley Nelson-Hornstein is now the co-founder of Sound Off, an org working to increase access to professional opps for marginalized people in tech.



Josh Bloch

@joshbloch

Josh is the former chief Java architect at Google and distinguished engineer at Sun Microsystems. He has authored many books including *Effective Java*, *Java Puzzlers*, and *Java Concurrency in Practice*.



Justin Searls

@searls

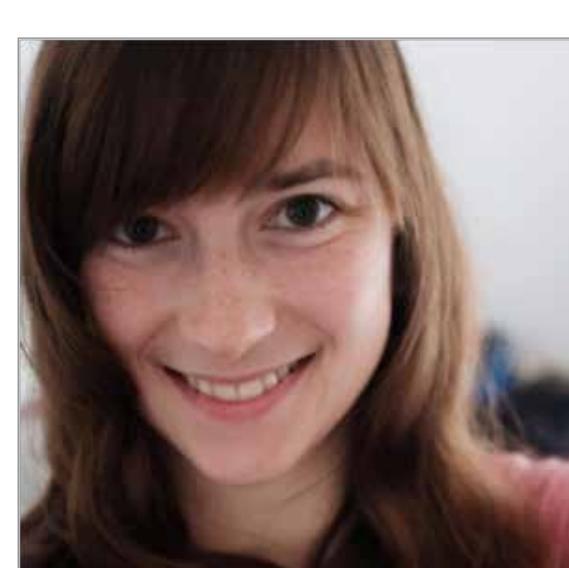
Justin Searls, along with his company Test Double, is on a mission to uncover the myriad ways that software fails businesses, developers, and users and improve how the world writes software.



Doug Cutting

@cutting

Doug Cutting is the Chief architect at Cloudera, the Co-creator of Lucene, Nutch, and Hadoop and is on the board of the Apache Software Foundation.



Ola Sendecka

@asendecka

Ola Sendecka serves as a Django Girls co-founder, a Django project core team member, a Senior Software Engineer at BuzzFeed and the author of "Coding is for Girls" YouTube channel.



Peter Lawrey

@PeterLawrey

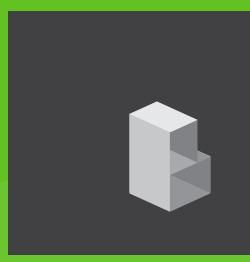
Peter is the CEO of Chronicle Software, a company specializing in consulting, training and development of low latency, high throughput applications in Java. He is also the author of the blog Vanilla Java.



Tor Norbye

@tornorbye

Tor Norbye is the tech lead on the Android team at Google.



podcasts for developers

The screenshot shows the Java Pub House website. The header features the site's name and a cartoon stick figure holding a beer mug. Below the header are links for Home, About the Podcast, Presentations, and Software. Social media links for Twitter and RSS feed are present, along with a "Subscribe to our Podcast!" button. A "PayPal" button is also visible. The main content area displays an episode titled "Episode 63. JCR (Java Content Repository) It as a Document Database before Document Databases were cool!". The episode summary discusses the Java Content Repository (JSR-170 and JSR-283) and its use in managing content. A cartoon illustration of a person working on a computer keyboard is included.

Java Pub House

This podcast is dedicated to the hard-working developer. If that's you, you'll hear talks about how to program in Java. You won't hear about your typical issues, but rather real problems, such as O/R setups, threading, getting certain components on the screen or troubleshooting tips and tricks.

The screenshot shows the JavaPubHouse Off-Heap's Podcast website. The header features the site's name and a cartoon illustration of people at a bar. Below the header are links for Home and About Us. The main content area includes sections for "About Us" and "Meet the Pundits!". A profile for "Freddy Guime" is shown, featuring a photo of him and some text about his background as a Senior Engineer at Expedia Inc. There are also links for "Subscribe to our Podcast!" (iTunes, RSS Feed, Feedburner Feed, Direct mp3 Download) and "About Me". A "Blog Archive" section shows posts from March 2017.

JavaPubHouse Off-Heap's Podcast

This Off-Heap podcast brings together the top circle of professionals from the Chicago area to discuss in-depth the latest tech news and current issues for the Java professions.

The screenshot shows the Illegal Argument website. The header features the site's name and a dark green background. The main content area has a title "More kiwi than kiwifruit" and a subtitle "Mark, Greg, Richard and Antony weekly discussion about topics relating to the Java/JVM space with an Auckland and New Zealand focus.". Below the title is a "Follow @IllegalArgument" button. The main content area also includes a "Contact Us" link, "Related Podcasts" (Unsupported Operation - Java news weekly, Class Not Found - conference recordings), and a "Blog" section showing posts from March 2017.

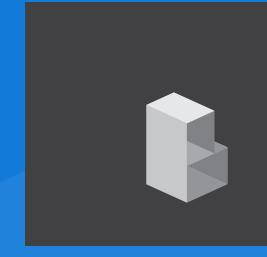
Illegal Argument

For the New Zealand developers, Greg, Mark and Richard get together and discuss Java, JVM and other things of interest in the Java community.

The screenshot shows the vJUG website. The header features the site's name and a "Meetup" logo. Below the header are links for Get the app, Home, Members, Sponsors, Photos, Discussions, More, English, and Log in. The main content area includes a "Join us!" button, a "Who do I know here?" button, and a "Log in with Facebook to find out" link. A sidebar on the left provides information about the London, United Kingdom chapter, stating it was founded on Sep 16, 2013.

vJUG

Sometimes high-quality technical sessions are tough to find. If you don't live near an active Java User Group, this Virtual JUG brings together the greatest minds and speakers of the Java industry who give talks and presentations in the form of webinars and JUG sessions streaming from JUG face-to-face meetups.



events to attend

React Amsterdam

April 20 - 21 // Amsterdam, The Netherlands

React Amsterdam is a full day two-track conference on all things React, gathering Front End developers across the globe in the tech heart of Europe.

JSConf EU

May 6-7 // Berlin, Germany

JSConf EU is a professional, not-for-profit, labour-of-love conference for the JavaScript community.

JSDay Italy

May 10-11 // Verona, Italy

Speakers from Uber, Klara, Booking.com, Balsamiq, Microsoft, Cisco, Facebook, Eventbrite, Samsung.

ReactEurope

May 16-19 // Paris, France

The conference aims to give talks that inspire and explore new futuristic ideas dealing with all the techs we enjoy from the React ecosystem such as React.js, React Native, GraphQL, Relay, Universal apps, Webpack, inline CSS and more.

Front-Trends

May 24-26 // Warsaw, Poland

The Front-Trends conference focuses on how the pros build the future face of the web while providing motivation from a wide spectrum of front-end talks beyond the ordinary.

Angular Cruise

May 29-June 2 // Leaves from Miami, Florida and travels to the Bahamas

Angular Cruise Speakers and workshops explore the recently released Angular 2 and feature talks on Angular's mobile strategy and implementation, Angular-CLI, RxJS, component architecture, CSS, and more.

Fluent

June 19-22 // San Jose, CA

Fluent focuses on practical training in JavaScript, HTML5, CSS, and associated technologies and frameworks, including WebGL, CSS3, mobile APIs, Node.js, AngularJS, and ECMAScript 6.

Frontend Conference

August 31-September 1 // Zurich, Switzerland

Frontend Conference Zurich hosts speakers from all over the world to share their knowledge and thoughts on modern front end development, user experience and design.

JavaOne

October 1-5 // San Francisco, California

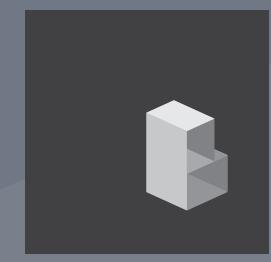
JavaOne is the conference for Java Devs! It features technical sessions, exhibitors, learning tracks, and the most important speakers from the Java world.

Angular Connect

November 7-8 // Excel, London

This multi-track conference features the world's leading Angular experts, including the core Angular team at Google.

linkedin groups + influencers



This screenshot shows the LinkedIn 'Java Developers' group page. The group has 334,347 members. It features a list of admins and a detailed 'ABOUT THIS GROUP' section. Below the group info, there's a sidebar with recommended programs like 'Project Management Master' and 'Masters in Athletic Admin'.

Java Developers

A place where Java Developers can share information, ideas, and grow professionally.

This screenshot shows the LinkedIn 'Front End Developer Group' page. The group has 52,589 members. It includes a list of admins and an 'ABOUT THIS GROUP' section describing the purpose of the group.

Front End Developer Group

This group's purpose is to share expertise with those interested in developing websites, intranets, microsites, HTML emails, Hand coding in HTML5, CSS3, JavaScript, JavaScript Frameworks and ajax.

<< Whoa - that's a lot of information! >>

We know that making time to make it all happen can be challenging.

We created a calendar out of all of the information found in this guide and spread it out over the course of a year so you can grow your skills without having to prioritize what comes first. You can even add in your own due dates, meetings, and team events!

Download now!

This is a yearly calendar for the month of January. It includes several events such as 'Check Code School', 'Java: A Beginner's Guide', 'Check Derek Banas', 'Check The New Boston', 'Interact with Nick Craver', 'NetConf Budapest - Budapest, Hungary', 'Agent Conference - Darmstadt, Austria', 'Sprint - Linz, Austria', and 'Check Off the Head'. A legend on the right side defines colors for different types of events: Book (red), Check Podcast (orange), Approx. Event Date (yellow), Check YouTube (green), Interact on Twitter (blue), and three types of reminders (purple, pink, light blue).



Stackify exists to increase developers' ability to create amazing applications as quickly as possible. We believe that the ideal development team, today and in the future, is consistently optimizing its output across the entire lifecycle of an application, from development to testing to production. Stackify's mission is to give developer teams easy access to powerful tools, which enable them to take the lead in delivering the best applications as quickly as possible.

If you're a developer, team lead, or architect, Stackify's tools were built for you. In fact, have two game-changing, code performance products no developer or dev team should ever be without:

P Prefix

Prefix is a popular developer tool for finding and fixing bugs while you write your code. You have profilers and debuggers, but nothing is like Prefix, and it's free!

Buildbetter

v2.2

Publisher: Stackify, ©2017

Editor in Chief & Creative Director:
Max Hobbs

Managing Editor:
Jayme Thomason

Copy Editor:
Laura Drucker

Art Director:
Kevin McCoy

Production Manager:
Jennilee Tangpuz

Marketing & Promotional Partner:
Brink Insights

R Retrace

Retrace is an APM tool built specifically for developers and dev teams. Our agent can install on pre-prod or production servers to make black boxes transparent for the coders. Try Retrace free for 14-days.