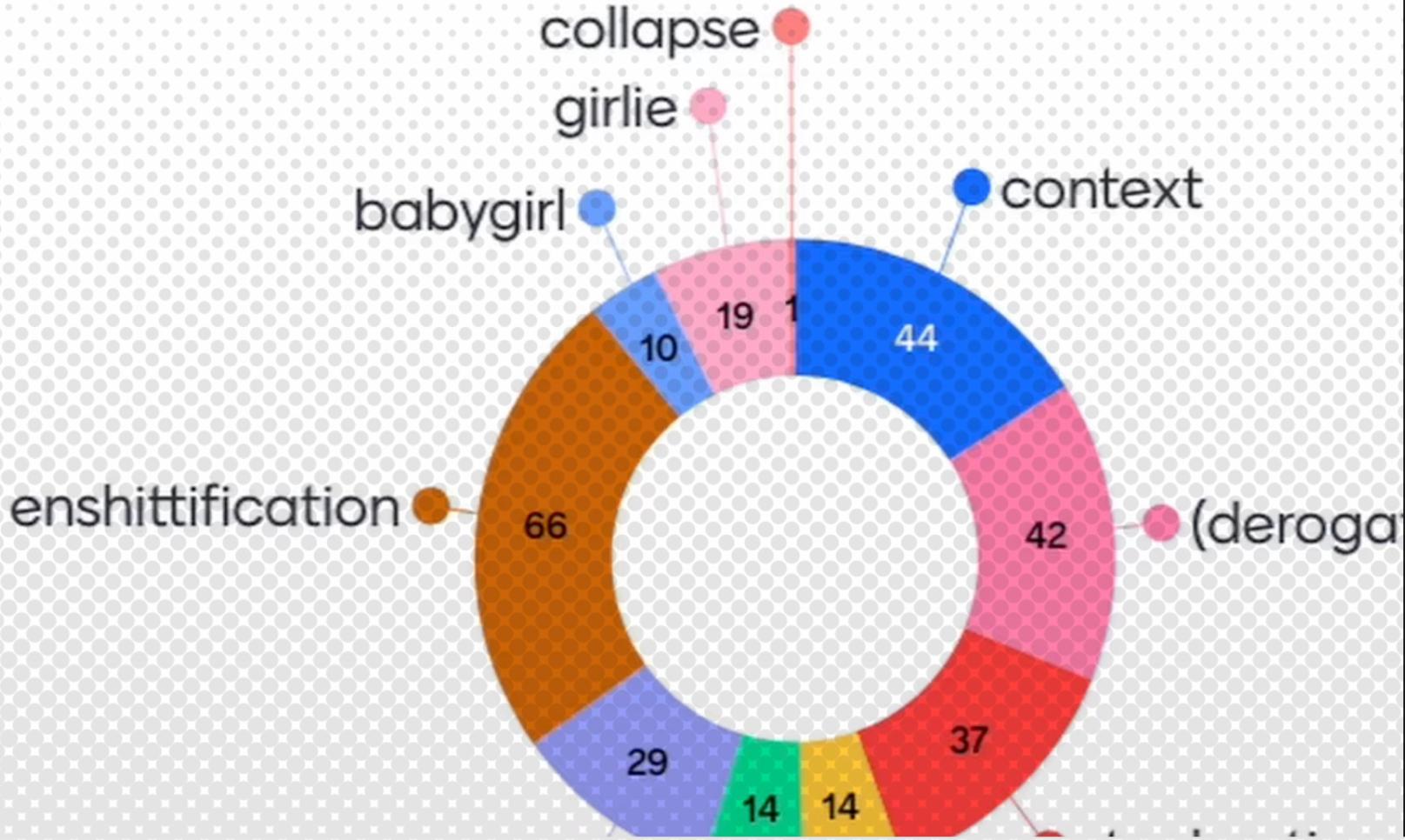


# **TECHNICAL ENSHITTIFICATION: WHY EVERYTHING IN IT IS HORRIBLE RIGHT NOW AND HOW TO FIX IT**



# Word of the Year



**ENSHITTIFICATION:**

**"WHEN PLATFORM... STARTS  
TO EXPLOIT [ITS] USER BASE...  
AT THE EXPENSE OF USER  
EXPERIENCE"**

**CORY DOCTOROW**



# ***SOCIO-ECONOMIC ENSHITTIFICATION***

Platform gathers  
users by  
providing value

Critical  
mass locks  
users in

Platform  
stops  
providing  
value,  
sells the  
users

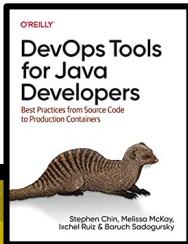
# **TECHNICAL ENSHITTIFICATION**

A purely technical (albeit reductionist) view



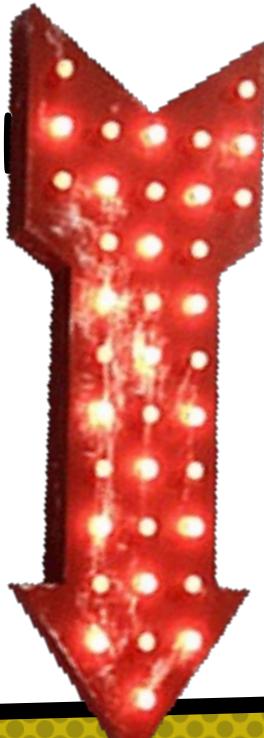
# **BARUCH SADOGURSKY - @JBARUCH**

- × Head of DevRel at TuxCare
  - × Still on Java 8 or 11? Talk to me about security patches for your libraries!
  - Developer Productivity Nerd
- × Development → DevOps → Productivity



## ***SHOWNOTES***

- × [speaking.jbaru.ch](http://speaking.jbaru.ch)
- × Slides
- × Video
- × All the links!



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# **IT'S A VEIN DIAGRAM**



1.

# **EVERYTHING IS GETTING WORSE**

Bugs... bugs are everywhere



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# **YOU HAD ONE JOB, OPERATING SYSTEM**

## **Microsoft Fixes and Explains Lost Files Issue with Windows 10 Version 1809**

By Kurt Mackie | 10/09/2018

Microsoft on Tuesday offered an explanation, an apology and a future resolution for its **flawed Windows 10 version 1809 release** last week, which caused files to go missing for some users.

Some users really did lose files, which happened when they upgraded to Windows 10 version 1809, also known as the "October 2018 Update." The reason why they lost them had to do with a Windows 10 feature called "Known



# **PRIVACY. THAT'S APPLE. KINDA.**



MGT7  
@MGT7500

Follow



My teen found a major security flaw in Apple's new iOS. He can listen in to your iPhone/iPad without your approval. I have video. Submitted bug report to [@AppleSupport](#)...waiting to hear back to provide details. Scary stuff! #apple #bugreport [@foxnews](#)

9:14 PM - 20 Jan 2019

166 Retweets 438 Likes



27

166

438



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# **TWITTER/X UX: IT'S NOT (ONLY) ELON'S FAULT**

X Support 🌟 @Support

Let's talk about Tweets disappearing from view mid-read when the timeline seems to auto-refresh. We know it's a frustrating experience, so we're working on changing it.

Over the next two months, we'll be rolling out updates to the way we show you Tweets so they don't disappear.

2:53 PM · Sep 22, 2021

739 1.6K 4.2K 127

← r/Twitter · 1 yr. ago  
bandeaubariana

**turn off auto scroll?**

COMPLAINTS

everytime i open twitter it automatically refreshes my feed. does any it? usually when i would open twitter and i could just scroll up to cor everytime and puts me at the top of the page. even if i try to hold dc will refresh when i take my finger off the screen again and make me

~~MOVE FAST AND BREAK THINGS~~



Docs

Tools

Sup

# Platform Bug Reports

## Other Platform Issues



Search for bugs by API error codes, SDK methods and more

Total Open Bugs: **29771** • Resolved Within 30 Days: **45.23 %**



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# YOU HAD ONE JOB, SECURE VAULT

LastPass

Contents hide

(Top)

Overview

History

Reception

Security incidents

2015 security breach

2021 third-party trackers and security incident

2022 customer data and partially-encrypted vault theft

See also

Notes

References

External links

Article Talk

Read Edit View history Tools

From Wikipedia, the free encyclopedia

LastPass is a password manager application.<sup>[3]</sup> The standard version of LastPass comes with a web interface, but also includes plugins for various web browsers and apps for many smartphones. It also includes support for bookmarklets.

Founded in 2008 by four developers,<sup>[4][5]</sup> Lastpass was acquired by GoTo (formerly LogMeIn Inc.) for \$110 million in 2015.<sup>[6]</sup> LastPass was spun-off from GoTo into a stand-alone business in 2024.<sup>[7]</sup>

LastPass suffered significant security incidents between 2011 and 2022. Notably, in late 2022, user data, billing information, and vaults (with some fields encrypted and others not)<sup>[a][8]</sup> were breached, leading many security professionals to call for users to change all their passwords and switch to other password managers.<sup>[9]</sup>

Overview [ edit ]

LastPass	
Company type	Private
Industry	Password management Computer security
Founded	2008; 17 years ago
Headquarters	125 High Street, Boston, Massachusetts, United States
Key people	Karim Touffa, CEO (2022–Present)
Revenue	\$200 million (2021)
Owners	GoTo (2015–2024) Francisco Partners (2024–) Elliott Management (2024–)
Number of employees	800+ (2024)
Website	<a href="https://lastpass.com">lastpass.com</a>
Footnotes / references	
[1][2]	

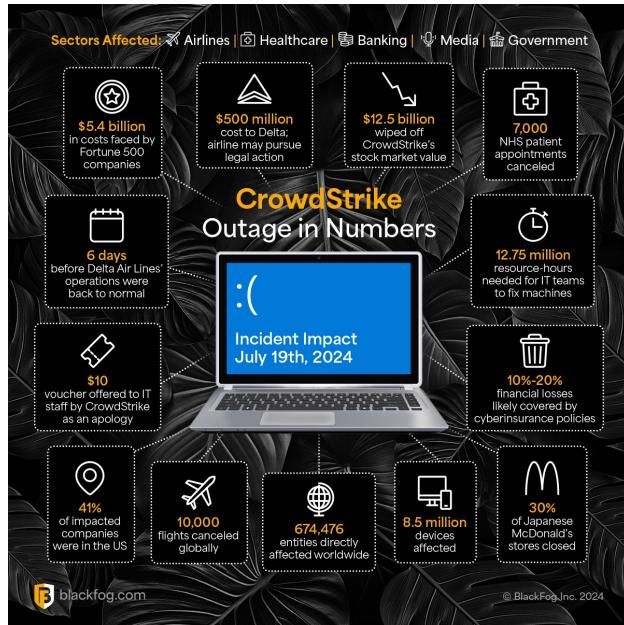


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# IF IT'S DOWN, NO ONE CAN HACK IT



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# **ON THE OTHER HAND, IF IT'S NOT PROTECTED, IT'S NOT DOWN!**

Southwest Airlines avoided CrowdStrike-Microsoft outage because it's still running Windows 3.1 — fourth-largest US airline remained free of BSOD errors because its OS hasn't been updated in decades

News By Wayne Williams published July 27, 2024

The airline also still uses Windows 95



When you purchase through links on our site, we may earn an affiliate commission. [Here's how it works.](#)



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# **BUT MAYBE RUNNING ON WIN 3.1 IS NOT A GREAT IDEA AFTER ALL**

Reuters



"OUTDATED TECHNOLOGY"

"Southwest is using outdated technology and processes, really from the '90s, that can't keep up with the network complexity today," Casey Murray, president of the Southwest Airlines Pilots Association, told Reuters.



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# LET'S ADD AI, WHAT CAN POSSIBLY GO WRONG

The screenshot shows a Cornell University logo and a link to member institutions at the top. Below it is the arXiv logo and a navigation bar with 'Search...', 'Help | Adv...', and a user icon. The main content area has a red header with the arXiv logo and category 'cs'. The title 'Computer Science > Cryptography and Security' is followed by a submission note: '[Submitted on 20 Aug 2021 (v1), last revised 16 Dec 2021 (this version, v3)]'. The title of the paper is 'Asleep at the Keyboard? Assessing the Security of GitHub Copilot's Code Contributions'. The authors listed are Hammond Pearce, Baleegh Ahmad, Benjamin Tan, Brendan Dolan-Gavitt, and Ramesh Karri. The abstract discusses the security of AI-generated code from GitHub Copilot, noting its potential to introduce bugs and vulnerabilities. A specific finding is highlighted with a red box: 'approximately 40% to be vulnerable.'

We gratefully acknowledge support from  
member institutions.

arXiv > cs > arXiv:2108.09293

Computer Science > Cryptography and Security

[Submitted on 20 Aug 2021 (v1), last revised 16 Dec 2021 (this version, v3)]

**Asleep at the Keyboard? Assessing the Security of GitHub Copilot's Code Contributions**

Hammond Pearce, Baleegh Ahmad, Benjamin Tan, Brendan Dolan-Gavitt, Ramesh Karri

There is burgeoning interest in designing AI-based systems to assist humans in designing computing systems, including tools that automatically generate computer code. The most notable of these comes in the form of the first self-described ‘AI pair programmer’, GitHub Copilot, a language model trained over open-source GitHub code. However, code often contains bugs – and so, given the vast quantity of unvetted code that Copilot has processed, it is certain that the language model will have learned from exploitable, buggy code. This raises concerns on the security of Copilot’s code contributions. In this work, we systematically investigate the prevalence and conditions that can cause GitHub Copilot to recommend insecure code. To perform this analysis we prompt Copilot to generate code in scenarios relevant to high-risk CWEs (e.g. those from MITRE’s “Top 25” list). We explore Copilot’s performance on three distinct code generation axes -- examining how it performs given diversity of weaknesses, diversity of prompts, and diversity of domains. In total, we produce 89 different scenarios for Copilot to complete, producing 1,689 programs. Of these, we found approximately 40% to be vulnerable.

# **NUMBER OF ISSUES...**

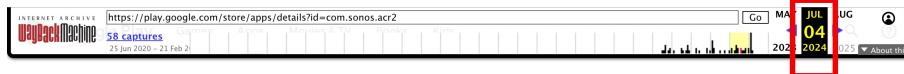
## **SONOS**

We know that too many of you have experienced significant problems with our new app which rolled out on May 7, and I want to begin by personally apologizing for disappointing you. There isn't an employee at Sonos who isn't pained by having let you down, and I assure you that fixing the app for all of our customers and partners has been, and continues to be, our **number one priority**.

We developed the new app to create a better experience, with the ability to drive more innovation in the future, and with the knowledge that it would get better over time. However, since launch we have found a number of issues. Fixing these issues has delayed our prior plan to quickly incorporate missing features and functionality.



# JUST A TINY BIT OF ISSUES



## Sonos

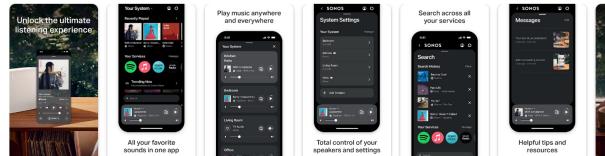
Sonos, Inc

1.2★  
195K reviews

5M+  
Downloads

E  
Everyone

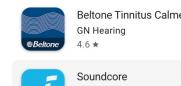
Install



SONOS

App support ▾

Similar apps →



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**2.**

# **STAGNATION**

No, slapping chatbot on doesn't  
count



# **WHAT'S NEW IN THE LATEST ANDROID AND IOS**

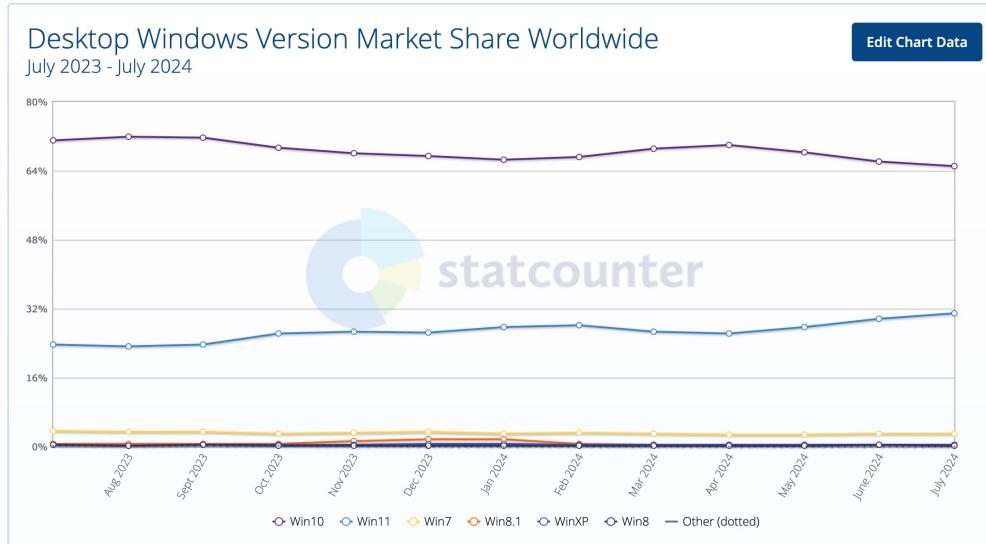


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# WINDOWS 10 VS WINDOWS 11: NAME 3 DIFFERENCES



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**3.**

# **SPEED OF INNOVATION**

Can ANYTHING be released in less  
than two years?



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# **LET'S JUST SLAP A CHATBOT ON IT!**

COMPUTERWORLD

Topics Spotlight: Solving Data Analytics Challenges News Events News

## Air Canada chatbot error underscores AI's enterprise liability danger

The Canadian airline has been ordered to pay for a pricing mistake by a customer-service chatbot, highlighting why companies must invest in monitoring their AI tools, analysts say.



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# EVEN SLAPPING CHATBOT ON TAKES YEARS

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Search

Written by Daniel Rausch, Vice President, Alexa and Fire TV

September 20, 2023

5 min read

Over the last few years, we've often talked about how we're living in a golden age of artificial intelligence (AI). Ideas that seemed like science fiction not so long ago are now a reality—no better example of that than Alexa. What started as a sketch on a whiteboard has evolved entirely new computing paradigm—one that has fundamentally changed how people around the world interact with technology in their homes. Having passed half a billion devices sold, tens of millions of interactions every hour, Alexa has become part of the family in millions of households. We've always thought of Alexa as an evolving service, and we've been continually improving it since the day we introduced it in 2014. A longstanding mission has been to bring conversation with Alexa as natural as talking to another human, and with the rapid development of generative AI, what we imagined is now well within reach. Today, we're excited to share a preview of what the future looks like.

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Search

## Availability

Alexa+ will start rolling out in the U.S. in the next few weeks during an early access period, and subsequently in waves over the coming months. We will prioritize Echo Show 8, 10, 15, and 21 device owners in the early access period. If you don't have one of those devices, and want to be among the first to experience Alexa+, you can buy one now. If you want to put your name on the list to be considered for early access, please visit [www.amazon.com/newalexa](http://www.amazon.com/newalexa).

I'm pumped about Alexa+, and I can't wait for you to try it.



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# **A FREAKING WIRELESS CHARGER**

## **Apple Officially Cancels AirPower**

Friday March 29, 2019 1:18 pm PDT by Juli Clover

Apple today canceled [AirPower](#), the charging mat that it first announced in 2017, because of an inability to meet its high standards for hardware, reports [TechCrunch](#).



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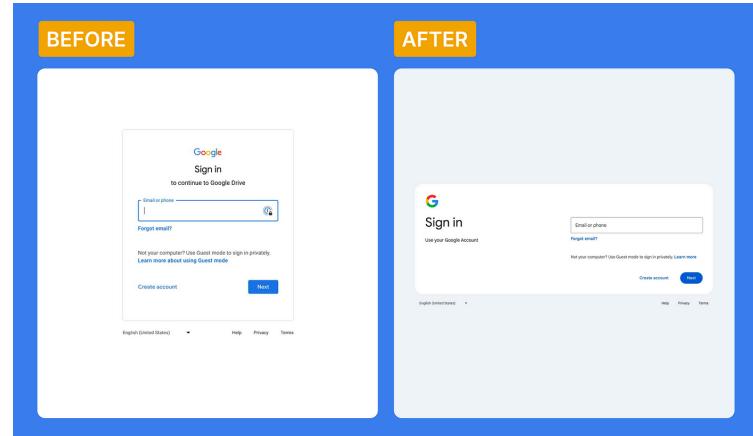
# A (NOT SO) NEW LOOK IS COMING (NOT SO) SOON



A new look is coming soon

Google is improving its sign-in page with a more modern look and feel

[Dismiss](#)



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# LIVING ON ELON'S TIME

WIKIPEDIA  
The Free Encyclopedia

Search Wikipedia

Search

Don

Contents hide

(Top)

See also

References

## List of predictions for autonomous Tesla vehicles by Elon Musk

[Article](#)[Talk](#)[Read](#) [Edit](#) [View history](#) [Tools](#)

From Wikipedia, the free encyclopedia

(Redirected from [List of Predictions for Autonomous Tesla Vehicles by Elon Musk](#))

This is a list of predictions for autonomous Tesla vehicles made by Elon Musk, CEO of [Tesla, Inc.](#). The predictions concern Tesla's suite of advanced driver assistance system (ADAS) functions, currently marketed as Full Self-Driving (Supervised) ("FSD"), and provide estimates for when Tesla will achieve fully autonomous driving, requiring no human intervention, which SAE considers [Level 5](#) automation. Tesla does not classify FSD according to the SAE levels of autonomy, but has acknowledged that full autonomy is "dependent on achieving reliability far in excess of human drivers as demonstrated by billions of miles of experience, as well as regulatory approval, which may take longer in some jurisdictions".<sup>[1]</sup>

Musk has publicly stated estimated timelines and intended capabilities of the system since at least 2013.<sup>[2]</sup> FSD and [Autopilot](#) are classified as [SAE Level 2 ADAS](#), as of January 2024.<sup>[3][4]</sup>

Elon Musk's predictions for autonomous Tesla vehicles					
Date	Prediction	Quote	Met	Ref.	
Sep 2013	2016	"We should be able to do 90 percent of miles driven [autonomously] within three years."	X No	[2]	
Oct 2014	2015	"A Tesla car next year will probably be 90-percent capable of autopilot. Like, so 90 percent of your miles can be on auto. For sure highway travel."	AP/HW1 released Oct 2015 for highways <sup>[4]</sup>	[5][6]	
Oct 2015	2018	"From a technology standpoint, Tesla will have a car that can do full autonomy in about three years, maybe a bit sooner."	X No	[7]	

## Tesla Cybertruck will get up to 500 miles of range and start at \$39,900



/ Can wil  
and bulle  
thrown a

by Sean O'Kane ark  
Nov 21, 2019, 11:21 PM I



Tesla CEO Elon Musk just unveiled the company's first electric pickup truck, also known as Cybertruck, at an event in Los Angeles, California. The truck will come in three versions with 250 miles, 300 miles, and 500 miles of range, respectively. And it will start at \$39,900. Musk said. The truck won't be rolling off the assembly line until late 2021, but preorders can be made at [tesla.com/cybertruck](#).



4.

# BLOAT

Old man yells at software size



# QUANTITY HAS A QUALITY OF ITS OWN



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# **SURFACE OF ATTACK IS INSANE**

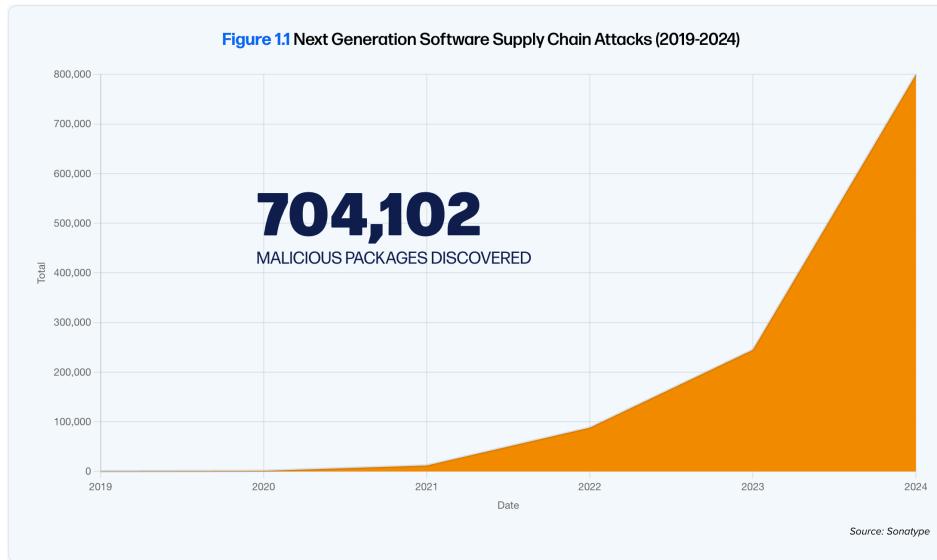
The screenshot shows a news article from IEEE Spectrum. At the top, there's a navigation bar with 'IEEE Spectrum' on the left, a search bar in the center, and 'Expl' on the right. Below the header, there are two small buttons: 'FEATURE' and 'COMPUTING'. The main title 'WHY BLOAT IS STILL SOFTWARE'S BIGGEST VULNERABILITY' is displayed in large white text on a black background. Below the title, it says 'BY BERT HUBERT | 08 FEB 2024'. Underneath the title, the author's name 'DANIEL ZENDER' is visible. In the bottom right corner of the main article area, there's a callout box containing an orange double arrow icon followed by the text: 'We are likely looking at over 50 million active lines of code to open a garage door....'

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# **ARE YOU AFRAID YET?**

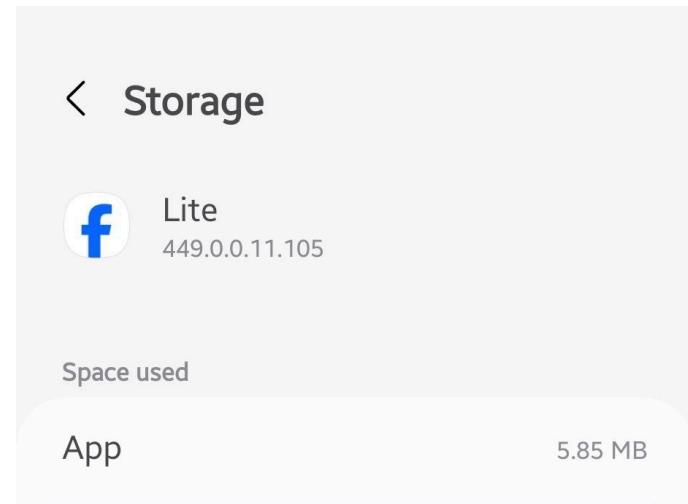


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# **F\*CK IT, WE'LL DO IT LITE**



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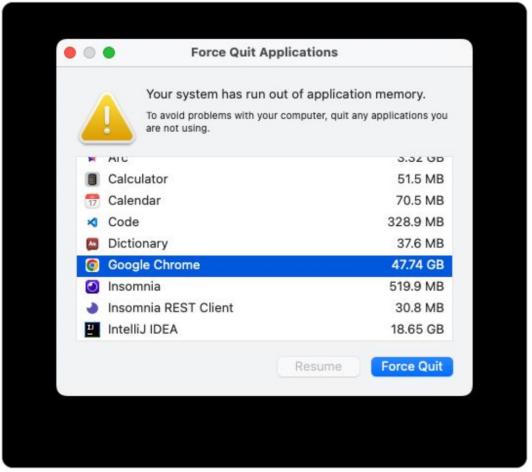
SPEAKING.JBARU.CH

# THE ELEPHANT IN THE ROOM (BY MEMORY CONSUMPTION)

Bazlur Rahman  
@bazlur.ca

Java Champion

Seriously Chrome! Are you trying to render the entire internet at once, or is 47.74GB just your casual morning appetite?

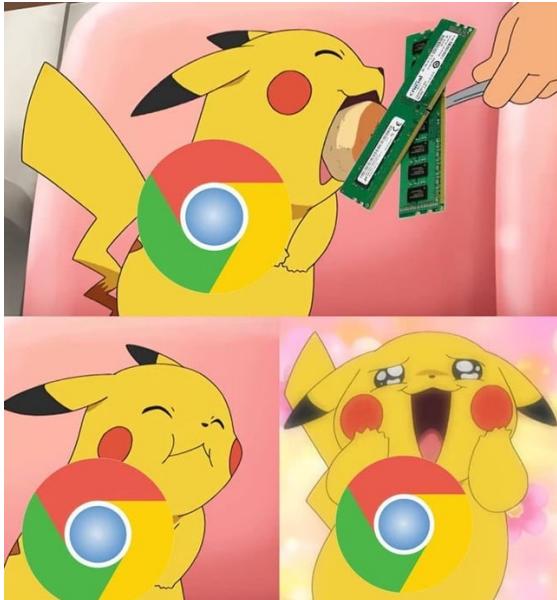


The screenshot shows a 'Force Quit Applications' dialog box. It displays a warning message: 'Your system has run out of application memory. To avoid problems with your computer, quit any applications you are not using.' Below the message is a list of applications and their memory usage:

Application	Memory Usage
Arc	5.32 GB
Calculator	51.5 MB
Calendar	70.5 MB
Code	328.9 MB
Dictionary	37.6 MB
Google Chrome	47.74 GB
Insomnia	519.9 MB
Insomnia REST Client	30.8 MB
IntelliJ IDEA	18.65 GB

At the bottom of the dialog are two buttons: 'Resume' and 'Force Quit'.

# **CHROME NOM-NOMS RAM**

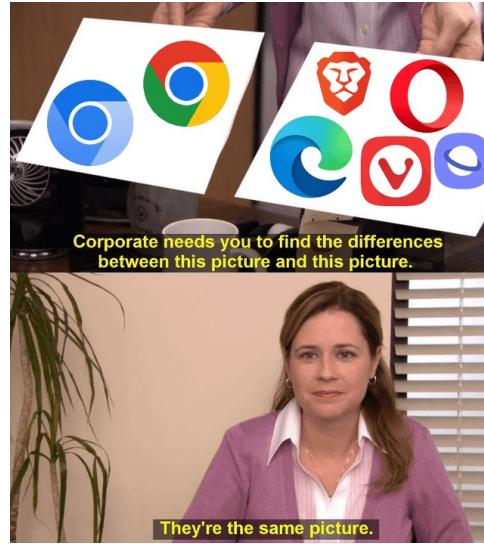


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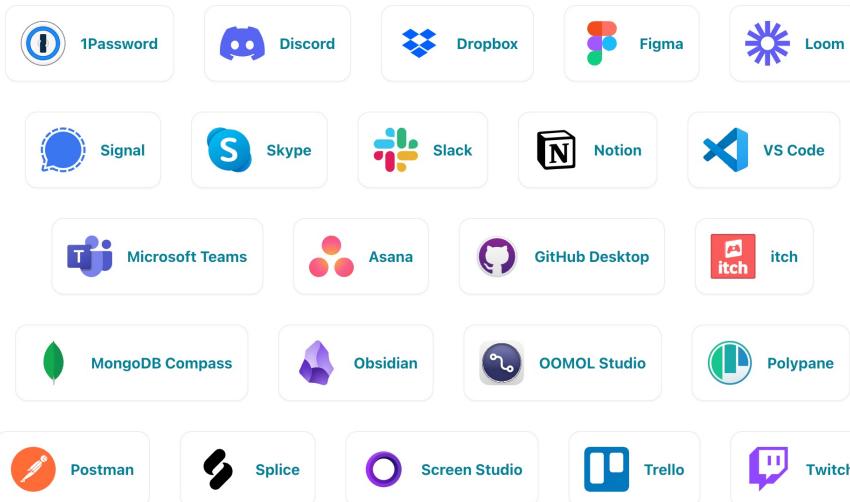
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# **CHROMIUM NOM-NOMS RAM**



# ***ELECTRON APPS NOM-NOMS RAM***



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# ***TALE OF TWO PDF READERS***

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## **Sumatra PDF**

PDF, eBook (epub, mobi), comic book (cbz/cbr), DjVu, XPS, CHM, image viewer for  
Windows.

Fast, small, packed with features, customizable, free.

**SumatraPDF-3.5.2-64.exe**

16.1 MB



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# TALE OF TWO PDF READERS

## Acrobat Reader 64-bit on Windows

Component	Requirement
Processor	Intel or AMD processor (1.5GHz or faster)
Operating system	<ul style="list-style-type: none"><li>Windows 11 (64 bit)</li><li>Windows 10 (64 bit) v1809 or later</li><li>Windows Server 2022</li><li>Windows Server 2019 (64 bit)</li><li>Windows Server 2016 (64 bit)</li></ul>
RAM	2GB
Hard disk space	900MB of available hard-disk space for English 1GB of available hard-disk space for other languages



# ***NO OZEMPIK FOR WEBSITES***

## **Median page weight over time**

Web Almanac 2024: Page Weight

desktop    mobile



**5.**

## **FEATURE MISMATCH**

Let's add features no-one needs  
and remove features people  
like



# WINDOWS 10 -> WINDOWS 11

The screenshot shows the Wikipedia article "List of features removed in Windows 11". The page has a standard layout with a sidebar on the left containing sections like "Bundled software", "No longer available", and "Not bundled, but available". A red box highlights the character count "5148 Characters" at the top of the main content area. The sidebar includes a "Windows 11" section with links to "Editions", "New features", "Removed features", "Version history", "Siblings", "Related", and "Windows Insider", "Microsoft Store", "Universal Windows Platform", and "Fluent Design System".

The screenshot shows the Wikipedia article "Features new to Windows 11". The page includes a warning message about multiple issues: "This article has multiple issues. Please help improve it or discuss these issues [hide] on the talk page. (Learn how and when to remove these messages)" with a note that the article's tone may not reflect the encyclopedic tone used on Wikipedia. A red box highlights the character count "18645 Characters" at the top of the main content area. The sidebar includes a "Windows 11" section with links to "Editions", "New features", "Removed features", "Version history", "Siblings", "Related", and "Windows Server 2025", "Windows Insider", "Microsoft Store", "Universal Windows Platform", and "Fluent Design System".

# **NEW APP AT ALL COSTS**

**Sonos says its controversial app redesign**

**took ‘courage’** / The company hears what customers are saying but insists the new app was necessary – even if it’s ‘a few steps back’ for now because of missing features.

Sonos has responded to the avalanche of feedback — some good, plenty bad — about the company’s redesigned mobile app that was released on May 7th. In the days since, customers have complained about missing features like sleep timers, broken local music library management, and no longer having the ability to edit playlists or the upcoming song queue. More alarmingly, the Sonos app’s accessibility has also taken a hit, something the company says it’s aiming to resolve by next month.



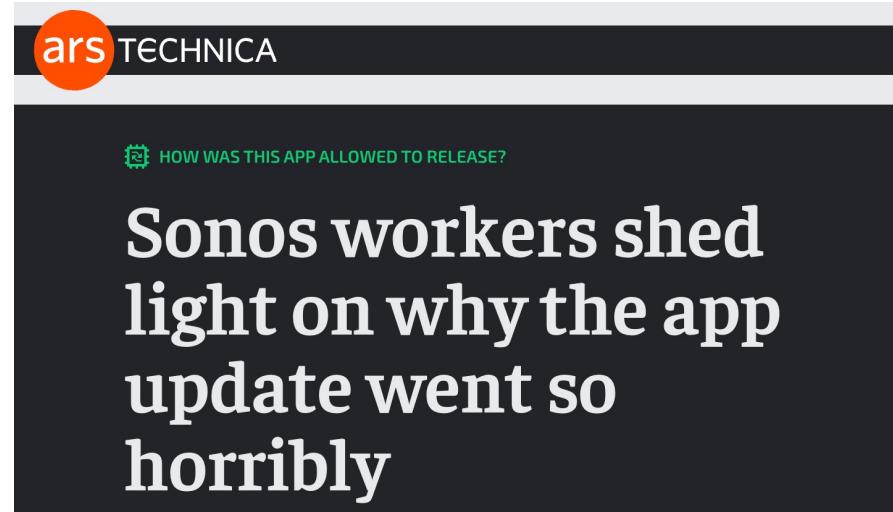


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**REMEMBER SONOS? LET'S LOOK WHY...**



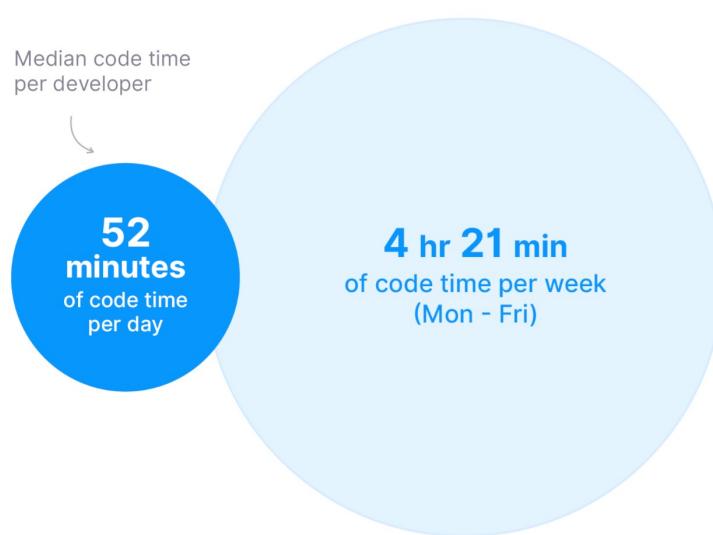
1.

# **NO-CODE**

To get new features out, developers  
should write code. They don't.



# **YOU CAN'T CREATE PRODUCT WITHOUT WRITING CODE**



## **2. MANAGEMENT**

There are so many ways to screw  
up when you're in  
management



# **WITH OVERCONFIDENCE**

## Sonos workers shed light on why the app update went so horribly

### Chaos and frustration reportedly preceded app launch

Ahead of the app's release and following company layoffs, Sonos Chief Product Officer Maxime Bouvat-Merlin reportedly instituted company reorganizations that caused chaos, two former workers said. People who have been following this story may remember Bouvat-Merlin telling *The Verge* in May amid customer complaints that it "takes courage to rebuild a brand's core product from the ground up, and to do so knowing it may require taking a few steps back to ultimately leap into the future." The comment didn't go over well with customers whose gear stopped working as intended due to the app's problems.

A former engineer told Bloomberg:

They separated people that had been working together for years creating great products. I don't understand what could motivate someone to shake things up like that.

Employees Bloomberg spoke with claimed that internal frustrations were high close to the app's scheduled launch date because the app wasn't ready. Three former workers who recently worked there pointed to "yelling" and "screaming" in meetings as employees tried to warn higher-ups. Employees claimed that Sonos



# **BAD ORG HABITS CAN KILL PRODUCTIVITY**



The slide has a yellow background with decorative icons (arrows, diamonds, circles) in the corners. The first statement reads: 'Is email stealing your focus? The average person checks their email 77 times a day.' The second statement reads: 'It takes 25 minutes to return focus to a task after interruption.'

**Is email stealing your focus?**  
The average person checks their email  
**77 times a day.**

**It takes 25 minutes to return focus**  
to a task after interruption.



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**3.**

## **ARTIFICIAL RIGID DEADLINES**

“Because I said so”



# **THE "ART" OF NOT LETTING GO**

## **Sonos workers shed light on why the app update went so horribly**

In May, Bloomberg reported that Sonos aimed to release the new app "at least a few weeks" before Ace. At the time, Bloomberg said that the update was originally supposed to release in March but was delayed due to "software-engineering challenges."

Although it makes sense that Sonos' most mobile offering yet would need a more advanced, revamped app, it seems that the app's redesign could have been initiated earlier than the mid-2022 timeframe that Bloomberg reported. In addition to the years of technical debt that has been said to be built up, Sonos' headphones have been reported to be in development since at least 2019.



**4.**

## **BAD CODE**

When developers do code, they are drawn in technical dept



# **YOU CAN'T CREATE VALUE FAST IF YOU'RE DROWNING**

## Sonos workers shed light on why the app update went so horribly

### **Outdated code**

One reason for the app's failure is the outdated code and infrastructure that the prior app was running on. Anonymous employees Bloomberg spoke with claimed that the Sonos app's technical debt had been building up for 20 years before the update.

By the time Sonos decided to update the app in mid-2022, it was dealing with software based on virtually obsolete infrastructure and code languages. As such, the app update "was less about introducing new functionality than sorting out the existing mess," Bloomberg reported.



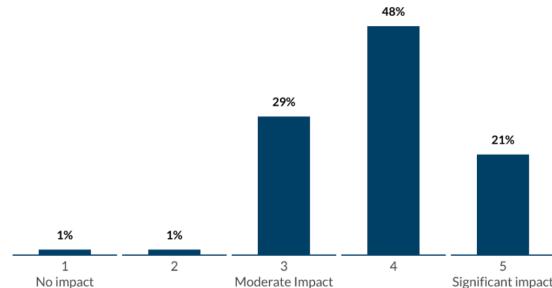
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# **IT'S NOT JUST SONOS**

What impact is technical debt  
having on your ability to  
innovate?



# **ONBOARDING TIME FOR NEW DEVELOPER**

## "Time to First Commit" as a metric

Published Feb 2, 2018

Filed under: development, work

For a while now, I've tracked my time-to-first-commit on each new client project. i.e. how long is the time gap between starting on the project, and making my first meaningful commit to the code base?

Over the years, this number has varied from a few hours to several weeks. And with **almost 100% correlation**, the shorter that time gap, the happier I've been over the long term as a developer on that project.



**5.**

# **MUCH MORE BAD CODE**

Let's let AI generate tons of bad code, what can possibly go wrong



# GARBAGE IN -> GARBAGE OUT

The screenshot shows a Cornell University logo and the text "We gratefully acknowledge support from the member institutions". Below this is the arXiv logo and the path "arXiv > cs > arXiv:2304.10778". A search bar and help links are also visible. The main title is "Computer Science > Software Engineering". The abstract begins with: "Submitted on 21 Apr 2023 (v1), last revised 22 Oct 2023 (this version, v2)]". The title of the paper is "Evaluating the Code Quality of AI-Assisted Code Generation Tools: An Empirical Study on GitHub Copilot, Amazon CodeWhisperer, and ChatGPT". The authors listed are Burak Yetişiren, Işık Özsoy, Miray Ayerdem, Eray Tüzün. The abstract discusses the increasing prevalence of AI-assisted code generation tools and compares GitHub Copilot, Amazon CodeWhisperer, and ChatGPT based on metrics like Code Validity, Correctness, Security, Reliability, and Maintainability. It also mentions the HumanEval Dataset and the newer versions of the tools.

We gratefully acknowledge support from the member institutions

arXiv > cs > arXiv:2304.10778

Computer Science > Software Engineering

[Submitted on 21 Apr 2023 (v1), last revised 22 Oct 2023 (this version, v2)]

**Evaluating the Code Quality of AI-Assisted Code Generation Tools: An Empirical Study on GitHub Copilot, Amazon CodeWhisperer, and ChatGPT**

Burak Yetişiren, Işık Özsoy, Miray Ayerdem, Eray Tüzün

Context: AI-assisted code generation tools have become increasingly prevalent in software engineering, offering the ability to generate code from natural language prompts or partial code inputs. Notable examples of these tools include GitHub Copilot, Amazon CodeWhisperer, and OpenAI's ChatGPT.

Objective: This study aims to compare the performance of these prominent code generation tools in terms of code quality metrics, such as Code Validity, Code Correctness, Code Security, Code Reliability, and Code Maintainability, to identify their strengths and shortcomings.

Method: We assess the code generation capabilities of GitHub Copilot, Amazon CodeWhisperer, and ChatGPT using the benchmark HumanEval Dataset. The generated code is then evaluated based on the proposed code quality metrics.

Results: Our analysis reveals that the latest versions of ChatGPT, GitHub Copilot, and Amazon CodeWhisperer generate correct code 65.2%, 46.3%, and 31.1% of the time, respectively. In comparison, the newer versions of GitHub Copilot and Amazon CodeWhisperer showed

# AI GETS CREATIVE WITH TECHNICAL DEBT

The screenshot shows a Cornell University logo and a link to member institutions. Below it is the arXiv logo and the URL arXiv:2103.09783. The title of the paper is "Characterizing Technical Debt and Antipatterns in AI-Based Systems: A Systematic Mapping Study". It was submitted on 17 Mar 2021. The authors are Justus Bogner, Roberto Verdecchia, and Ilias Gerostathopoulos. The abstract discusses the rising popularity of Artificial Intelligence (AI) and the need to manage technical debt (TD) in AI-based systems. It highlights the stochastic nature of AI and its impact on TD. The study identifies 21 primary studies and 72 antipatterns. Results show that established TD types like data, model, configuration, and ethics debt are present, while four new TD types (data, model, configuration, and ethics debt) are proposed. The paper also discusses 46 solutions proposed to manage TD.

We gratefully acknowledge support from our member institutions.

arXiv > cs > arXiv:2103.09783

Computer Science > Software Engineering

[Submitted on 17 Mar 2021]

**Characterizing Technical Debt and Antipatterns in AI-Based Systems: A Systematic Mapping Study**

Justus Bogner, Roberto Verdecchia, Ilias Gerostathopoulos

Background: With the rising popularity of Artificial Intelligence (AI), there is a growing need to build large and complex AI-based systems in a cost-effective and manageable way. Like with traditional software, Technical Debt (TD) will emerge naturally over time in these systems, therefore leading to challenges and risks if not managed appropriately. The influence of data science and the stochastic nature of AI-based systems may also lead to new types of TD or antipatterns, which are not yet fully understood by researchers and practitioners. Objective: The goal of our study is to provide a clear overview and characterization of the types of TD (both established and new ones) that appear in AI-based systems, as well as the antipatterns and related solutions that have been proposed. Method: Following the process of a systematic mapping study, 21 primary studies are identified and analyzed. Results: Our results show that (i) established TD types, variations of them, and four new TD types (data, model, configuration, and ethics debt) are present in AI-based systems, (ii) 72 antipatterns are discussed in the literature, the majority related to data and model deficiencies, and (iii) 46 solutions have been proposed, either to

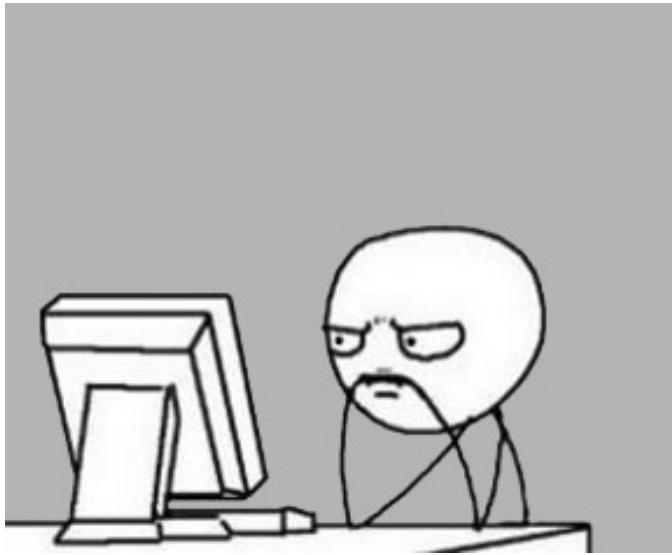
6.

# **COMPLEXITY**

More code, especially bad code  
makes it impossible to understand  
tech



## **EXAMPLE: SECURITY**



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1.

# **WRONG FEATURES**

How do product managers know  
what we want? They don't.



# **PRODUCT MANAGEMENT IS GUESSWORK**

Percentage of organizations leveraging analytics



Data source: Deloitte—Becoming an insight-driven organization, 2019



8.

## **COPY THE TREND**

Let's just do the current thing



# **MORE "SHITIFICATION"**

The screenshot shows the header of the Single Grain website. At the top left is the Single Grain logo, which is a stylized grain icon next to the text "Single Grain". To the right are five main navigation items: "Services", "Industries", "About Us", "Learn", and a partially visible orange button. Below these are secondary navigation items: "All", "Artificial Intelligence", "Marketing 101", "SEO", "Social Media" (which is underlined in red), "Marketing Strategy", and "ABM". At the bottom of the header are two more items: "Content Marketing" and "Pay Per Click".

Single Grain > Social Media > The Tiktokification of Everything

## **The Tiktokification of Everything**

ERIC SIU

Last updated: October 16th, 2024

What is TikTokification? Well, have you noticed that practically all types of social media now look like TikTok?

Even if you've managed to stay off this particular short-form video platform, you've still been exposed to the TikTok formula. The TikTokification of social media means that other social networks like Facebook and YouTube have been following in TikTok's footsteps (or dance steps).

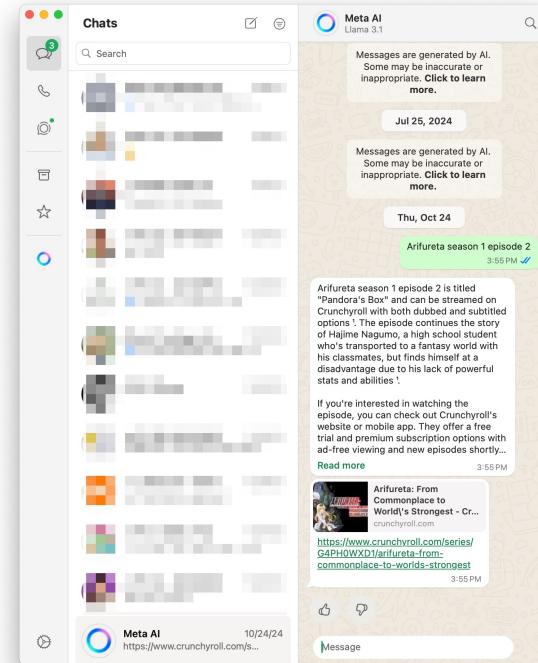


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# AI ASSISTANTS EVERYWHERE



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# WE CAN FIX SOME OF IT



God, grant me the serenity to accept the things I cannot change, the courage to change the things I can, and the wisdom to know the difference.



1.

# **PRODUCTIVITY**

How to write more code



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## ***FAST FEEDBACK = FAST FIXES***

Keep loops tight.



## ***AUTOMATE OR DIE***

No manual toil.



## ***TAKE POWER NAPS***

Yeah, really.



## ***KILL DISTRACTIONS***

Protect deep focus time



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MON

Meeting

Task

Meeting

Task

TUE

Task

Meeting

Meeting

Meeting

WED

Task

Meeting

Meeting

THU

Task

Meeting

FRI

Meeting



Lunch

30 mins - 1 hr Every day

Add

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# **USE AI SMARTLY!**

## **RIGHT TOOL - RIGHT JOB**

Not all tools are created equal.

## **LOCAL AI = CONTROL**

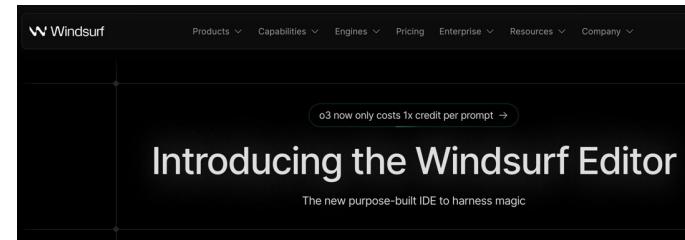
Better control and privacy.

## **GO DEEP, NOT WIDE**

ATM specialized beats  
generalized



# ***AGENTIC AI IS RAD IF IT DOES THE RIGHT THING***



A screenshot of the Visual Studio Code interface showing the "Agent mode" extension. The sidebar on the left lists "Overview", "SETUP", "GET STARTED", "CONFIGURE", "EDIT CODE", "BUILD, DEBUG, TEST", and "Try MCP servers to extend agent mode in VS Code!". The main content area shows a heading "Use agent mode in VS Code" and a detailed explanation of how the feature works.

The Cursor AI Code Editor landing page has a dark header with the company logo and navigation links: Pricing, Features, Enterprise, Blog, Forum, and Careers. The main title "The AI Code Editor" is displayed in large, white, bold letters. Below it, a subtitle reads "Built to make you extraordinarily productive, Cursor is the best way to code with AI." There is also a "Sign in" button and a "Download" button.

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# **KEEP AI IN CHECK! USE TOOLS AND MCP SERVERS!**

The screenshot shows a web browser window with the following details:

- Header:** A navigation bar with a logo icon labeled "Context7", and links for "MCP Server", "API", "About", and a green button "+ Add Docs".
- Left Sidebar:** A sidebar titled "Up-to-date documentation for LLMs and AI code editors". It includes a search bar with placeholder text "Search a library (e.g. Next, React)".
- Main Content:** A section titled "GitHub MCP Server" with the following text:

The GitHub MCP Server is a [Model Context Protocol \(MCP\)](#) server that provides seamless integration with GitHub APIs, enabling advanced automation and interaction capabilities for developers and tools.
- Use Cases:** A list of use cases including:
  - Automating CI/CD pipelines.
  - Integrating with GitHub Actions.
  - Creating custom GitHub applications.
  - Developing AI-powered GitHub integrations.

## **Playwright MCP**

A Model Context Protocol (MCP) server that provides browser automation capabilities using [Playwright](#). This server enables LLMs to interact with web pages through **structured accessibility snapshots**, bypassing the need for screenshots or visually-tuned models.

2.

## **AGILE (YES, IT'S 2025)**

Not necessarily what you think



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1

## ***REACT, DON'T OVERPLAN***

Code > meetings

2

## ***DECIDE LATE, BUT NOT TOO LATE***

More data = better calls

3

## ***SMALL BETS WIN***

Make choices that are easy to undo

4

## ***MOVE***

Done is better than perfect



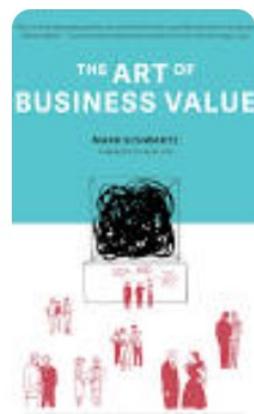
# Mark Schwartz

Author :

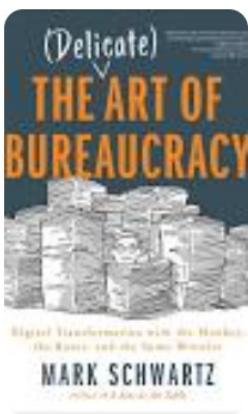
Overview

Books

## Books



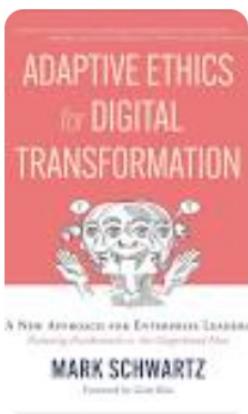
The Art of  
Business Value  
2016



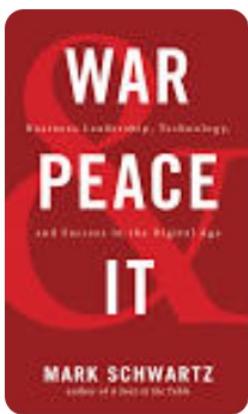
The (Delicate)  
Art of...  
2020



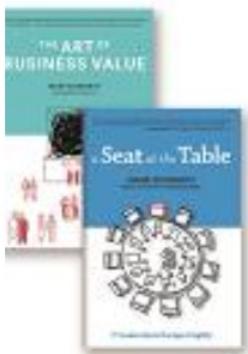
A Seat at the  
Table: IT...  
2017



Adaptive Ethics  
for Digital...  
2023



War and Peace  
and IT....  
2019



A Seat at the  
Table and Th...  
2017



3.

## ***DEVOPS (YES, IT'S 2025)***

Probably exactly what you think



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## ***DEVOPS TEAM - NO. DEVOPS - YES.***

DevOps Engineers do not exist, DevOps Team is just a silo. Do DevOps right

## ***DON'T DO MANUAL WORK***

Automate all the things

## ***RELEASE = BREATHING***

If it's painful, you're doing it wrong

## ***FEATURE FLAGS > BRANCH HELL***

You test in production anyway. Make it less painful

4.

## ***WRITE GOOD CODE***

Well, that sounds actionable





## ***WRITE FOR FUTURE-YOU***

What idiot wrote this?!



## ***READABLE > CLEVER***

If it calls for comment, rewrite it



## ***REFACTOR OR ROT***

Bad code never gets better on its own.



## ***TECHNICAL DEBT***

Kill it before it kills you



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# **WRITE DOCS, FIND DOCS**



Why us

Use cases

How it works

Enterprise

Request Demo

## Greater Context for **Better Code**

Naboo offers organization-specific LLMs (Dedicated RAG) for total code, product, and business context — built right into every step of your development workflow.



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**5.**

## **THINK NEGATIVELY**

Not in live, just about your code



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## *HACKERS LOVE OPTIMISTIC DEVS*

Don't feed them



## *ERROR HANDLING, NOT IGNORING*

Catch and recover



## *RETRIES AND FAILBACKS = HAPPY USERS*

Ensure resilience



## *MONITORING ISN'T OPTIONAL*

Getting feedback on social is  
not great



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**6.**

## ***KNOW WHAT YOU DON'T KNOW***

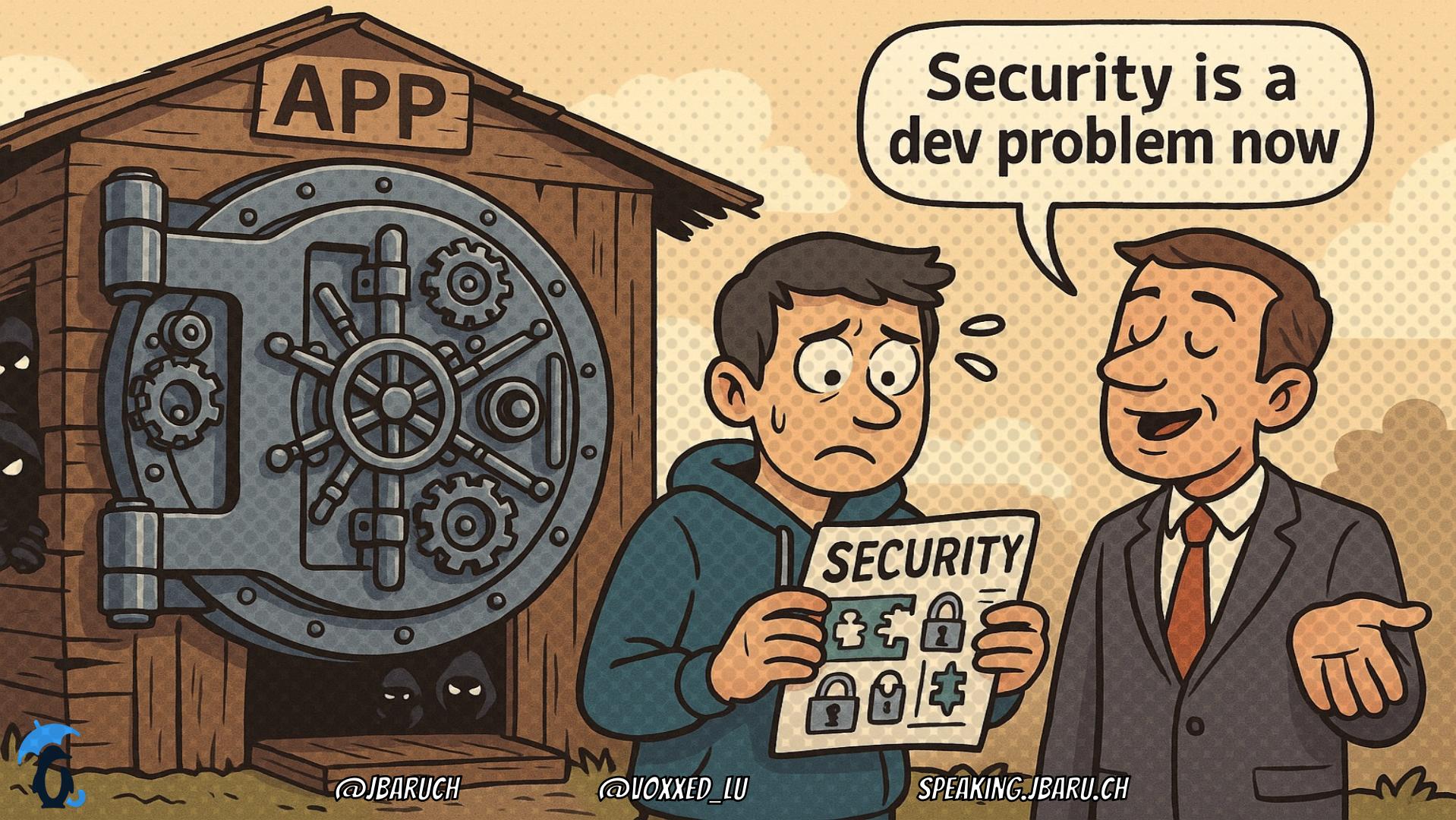
But don't panic



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# ***DELEGATE TO PROS WHEN NEEDED***



The advertisement features a dark blue background with a faint watermark of a hand holding a wrench in the center. In the upper left, there's a white icon of a Linux Tux mascot head with a checkmark inside its head. In the lower right, there are two overlapping circles: one white with a blue checkmark and one blue with a white checkmark. The text "SecureChain for Java" is prominently displayed in white, bold, sans-serif font. Below it, a smaller line of text reads: "Gain access to a single trusted repository of vetted Java packages and libraries to keep your applications secure".

7.

## **HELP YOUR BUSINESS**

Even regular dev can help



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## **TALK THEIR TALK**

"Faster time-to-market"

**MEETINGS SUCK**

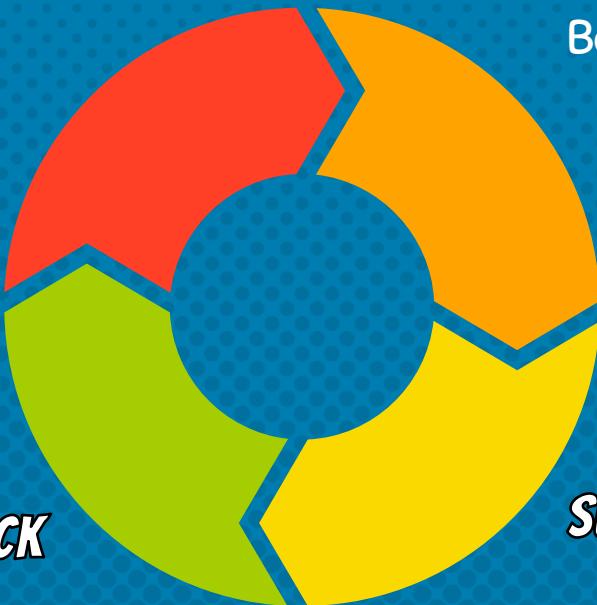
Write it down

## **SARCASM ≠ FEEDBACK**

Be direct, not snarky

**SURPRISES ARE BAD**

Flag issues early



# ***EVERYTHING IS TERRIBLE, BUT IT DOESN'T HAVE TO BE***

- × It's not just you, enshittification is real
- × Developer productivity and managerial decisions to blame
- × You, the developer, can help!



# THANKS!



Q&A and ~~Twitter~~ X/Bsky/Mastodon/LinkedIn ads:

- ✗ @jbaruch
- ✗ @voxxed\_lu
- ✗ speaking.jbaru.ch

