

Debating While Coding


YEGOR BUGAYENKO

Lecture #1 out of 8

80 minutes

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1. Open source must be the only way for you to write code [Bugayenko, 2015].



NAVEEN RAMAN


“Among the many reasons to contribute to open source, building one’s professional reputation and signaling one’s skills to potential employers are common ones.”

— Naveen Raman, Minxuan Cao, Yulia Tsvetkov, Christian Kästner, and Bogdan Vasilescu. Stress and Burnout in Open Source: Toward Finding, Understanding, and Mitigating Unhealthy Interactions. In *Proceedings of the 42nd International Conference on Software Engineering: New Ideas and Emerging Results*, pages 57–60, 2020. doi:[10.1145/3377816.3381732](https://doi.org/10.1145/3377816.3381732)



“When individuals release open source projects, their motivations are often altruistic. However, the best companies are not open sourcing things for the altruism. There are real, strategic reasons hidden behind the warm and fuzzy glow of open source.”

— David Mytton. What’s the Real Reason Microsoft and Google Are Releasing Open Source?, feb 2016



2. Be fully prepared for the toxicity of open source terrain.



YULIA TSVETKOV

“Toxic language in open source can manifest in multiple ways, including hate speech and microaggressions found also elsewhere online (e.g., YouTube), but also through open-source-specific displays of entitlement and urgency related to timing expectations.”

— Naveen Raman, Minxuan Cao, Yulia Tsvetkov, Christian Kästner, and Bogdan Vasilescu. Stress and Burnout in Open Source: Toward Finding, Understanding, and Mitigating Unhealthy Interactions. In *Proceedings of the 42nd International Conference on Software Engineering: New Ideas and Emerging Results*, pages 57–60, 2020. doi:[10.1145/3377816.3381732](https://doi.org/10.1145/3377816.3381732)



COURTNEY MILLER

“Within open source, entitled and demeaning complaints, arrogance, and insults are common forms of toxicity.”

— Courtney Miller, Sophie Cohen, Daniel Klug, Bogdan Vasilescu, and Christian KaUstner. “Did You Miss My Comment or What?” Understanding Toxicity in Open Source Discussions. In *Proceedings of the 44th International Conference on Software Engineering*, pages 710–722, 2022. doi:[10.1145/3510003.3510111](https://doi.org/10.1145/3510003.3510111)



ISABELLA FERREIRA

“We conducted a qualitative analysis on 1,545 emails from the Linux Kernel Mailing List that were associated with rejected changes. We found that more than half (67%) of the non-technical emails included uncivil features. Particularly, frustration, name calling, and impatience are the most frequent features in uncivil emails. ”

— Isabella Ferreira, Jinghui Cheng, and Bram Adams. The “Shut the F** K Up” Phenomenon: Characterizing Incivility in Open Source Code Review Discussions. *Proceedings of the ACM on Human-Computer Interaction*, 5(2):1–35, 2021. doi:[10.1145/3479497](https://doi.org/10.1145/3479497)

From Linus Torvalds <>
Date Sun, 23 Dec 2012 09:36:15 -0800
Subject Re: [Regression w/ patch] Media commit causes user space to misbahave (was: Re: Linux 3.8-rc1)

On Sun, Dec 23, 2012 at 6:08 AM, Mauro Carvalho Chehab
<mchehab@redhat.com> wrote:

>
> Are you saying that pulseaudio is entering on some weird loop if the
> returned value is not -EINVAL? That seems a bug at pulseaudio.

Mauro, SHUT THE FUCK UP!



“Most free software projects fail.”

— Karl Fogel. *Producing Open Source Software: How to Run a Successful Free Software Project*. O'Reilly Media, Inc, 2005

3. Always start your message with a nickname of the person who you are talking to [Bugayenko, 2020].

The screenshot shows a GitHub pull request conversation. It starts with Yanich96 (Contributor/Author) explaining a change to fix OptCached and OptCachedTest. Yanich96 mentions that they deliberately left reading the name from the file to avoid breaking program logic and tests. Then, volodya-lombrozo (Member) asks if they can implement this directly without adding potentially dangerous code. Yanich96 responds that they don't know how to avoid the code but that it occurs when reading an XML file. volodya-lombrozo then asks why they need to change `XML apply(XML)` to `XML apply(Path)`. Yanich96 lists two reasons: 1. Only using the path can find out the last modification time of the XML file. 2. Using the path allows not to read the XML file, speeding up the compiler. Finally, volodya-lombrozo asks if they can save the 'last modification time' to XMR and simply utilize it. Yanich96 explains that the solution significantly slows down the compiler due to unnecessary read/write operations from the file system.

Yanich96 2 days ago Contributor Author ...
@volodya-lombrozo This task is fix OptCached and OptCachedTest.
I deliberately left reading the name from the file so as not to break the program logic and tests. I created the issue in this PR in which I want to remove reading from a file. After removing reading from the file, the added interface and execution will not be needed.

volodya-lombrozo yesterday Member ...
@Yanich96, can we implement this directly without adding any potentially dangerous code? It appears that we may not need this code at all. Why introduce this intermediate step?

Yanich96 yesterday Contributor Author ...
@volodya-lombrozo
At the moment, I don't know how to avoid this code. But this code occurs when reading a XML file. In my current task, only its name is taken from the XML file. The next step is that I want to get the program name from the absolute path, but I need to understand how the absolute paths of the program itself and its cache are obtained. In the next task the dangerous code will be removed.

volodya-lombrozo yesterday Member ...
@Yanich96 Sorry, maybe I don't clearly understand you. Why do you need to change `XML apply(XML)` to `XML apply(Path)` ?

Yanich96 yesterday Contributor Author ...
@volodya-lombrozo
1. Only using the path can you find out the time of the last modification of the XML file.
2. Using the path allows us this allows us to not read the XML file. This will speed up the compiler.

volodya-lombrozo yesterday Member ...
@Yanich96, maybe we can save the 'last modification time' to XMR and simply utilize it?
As I've already mentioned, the solution significantly slows down the compiler due to unnecessary read/write operations from the file system. Consequently, I don't understand which speed up you mean.

Reply...


Resolve conversation

Every message starts with a
nickname of the person who is the
opponent in the conversation.

Github pull request:
objectionary/eo#2808



4. In an argument, provide links that support your point of view.



5. Beautify your profile, start with an anthropomorphic avatar [Bugayenko, 2020].



KRISTINE NOWAK

“Avatars that were more anthropomorphic were perceived to be more attractive and credible. The strongest predictor of these variables, however, was the degree of masculinity or femininity (lack of androgyny) of an avatar.”

— Kristine L. Nowak and Christian Rauh. The Influence of the Avatar on Online Perceptions of Anthropomorphism, Androgyny, Credibility, Homophily, and Attraction. *Journal of Computer-Mediated Communication*, 11(1):153–178, 2005. doi:[10.1111/j.1083-6101.2006.tb00308.x](https://doi.org/10.1111/j.1083-6101.2006.tb00308.x)



JOSH TERRELL

“Surprisingly, our results show that women’s contributions tend to be accepted more often than men’s. However, for contributors who are outsiders to a project and their gender is identifiable, men’s acceptance rates are higher.”

— Josh Terrell, Andrew Kofink, Justin Middleton, Clarissa Rainear, Emerson Murphy-Hill, Chris Parnin, and Jon Stallings. Gender Differences and Bias in Open Source: Pull Request Acceptance of Women Versus Men. *PeerJ Computer Science*, 3(1):111, 2017. doi:[10.7717/peerj-cs.111](https://doi.org/10.7717/peerj-cs.111)



REZA NADRI

“We have identified that submitters perceptible as Hispanic and Black have 39% of their pull requests rejected because they are seen as unnecessary, which is 10-12 percentage points more frequent than the rest of perceptible races.”

— Reza Nadri, Gema Rodriguez-Perez, and Meiyappan Nagappan. Insights into Nonmerged Pull Requests in GitHub: Is There Evidence of Bias Based on Perceptible Race? *IEEE Software*, 38(2):51–57, 2021.
doi:[10.1109/MS.2020.3036758](https://doi.org/10.1109/MS.2020.3036758)



NASIF IMTIAZ

“We found that women did not provide more information on competence and were not generally measured at a stricter standard than men. We observed that women were less likely to express politeness and profanity than men, and were more restrictive in expressing their sentiments on the platform.”

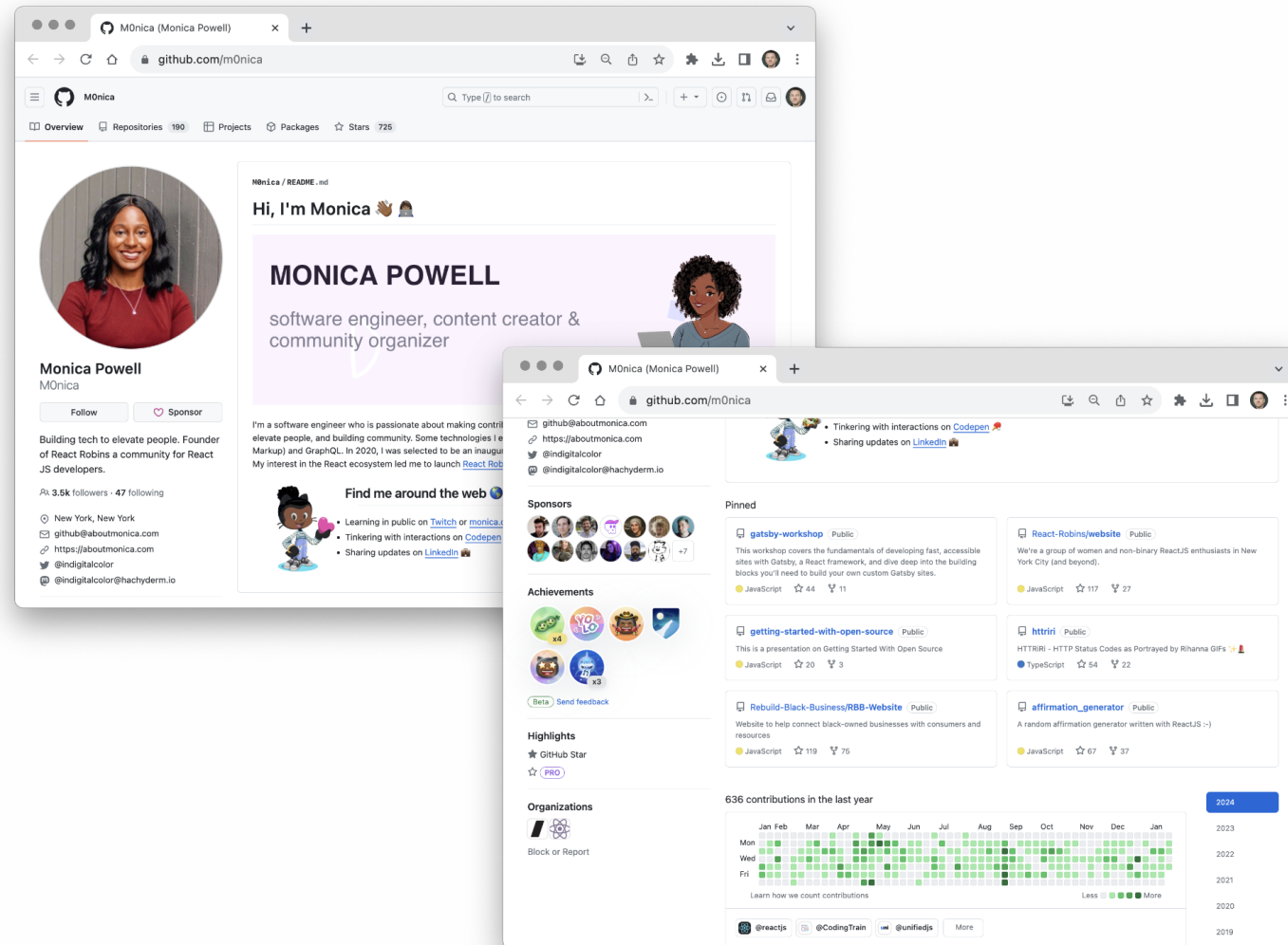
— Nasif Imtiaz, Justin Middleton, Joymallya Chakraborty, Neill Robson, Gina Bai, and Emerson Murphy-Hill. Investigating the Effects of Gender Bias on GitHub. In *Proceedings of the 41st International Conference on Software Engineering (ICSE)*, pages 700–711. IEEE, 2019. doi:[10.1109/ICSE.2019.00079](https://doi.org/10.1109/ICSE.2019.00079)




CAROLYN D. EGELMAN

“Being a new employee is not a statistically significant predictor of any of our feelings of pushback. Compared to authors at level 1 (entry level), authors at level 3 are 28% less likely to see conflict in their code review changes.”

— Carolyn D. Egelman, Emerson Murphy-Hill, Elizabeth Kammer, Margaret Morrow Hodges, Collin Green, Ciera Jaspan, and James Lin. Predicting Developers’ Negative Feelings About Code Review. In *Proceedings of the 42nd International Conference on Software Engineering*, pages 174–185, 2020. doi:[10.1145/3377811.3380414](https://doi.org/10.1145/3377811.3380414)





6. Stay in the ticket, don't escape to Telegram, Slack, or an office debate [Bugayenko, 2014].



BEN BALTER

“You essentially never “walk over” to a coworker’s desk, virtual or otherwise. Whenever possible, prefer issues and chat, to “just in time” communications.”

— Ben Balter. 15 Rules for Communicating at GitHub. <https://ben.balter.com/2014/11/06/rules-of-communicating-at-github/>, nov 2014. [Online; accessed 22-03-2024]



“The findings showed a tendency toward more equal participation in computer mode. Students used language which is lexically and syntactically more formal and complex in electronic discussion than they did in face-to-face discussion, thus demonstrating another possible advantage of computer-mediated communication.”

— Mark Warschauer. *Comparing Face-to-Face and Electronic Discussion in the Second Language Classroom*, 1995

	In Face-to-Face Discussion	In Electronic Discussion
I can express myself freely	3.53	3.87
I am comfortable in expressing opinions	3.27	3.93
I can creatively express opinions	3.27	3.60
I feel stress	2.80	1.87
Helps improve my thinking ability	4.00	4.07
The InterChange program is easy to use	n.a.	4.00

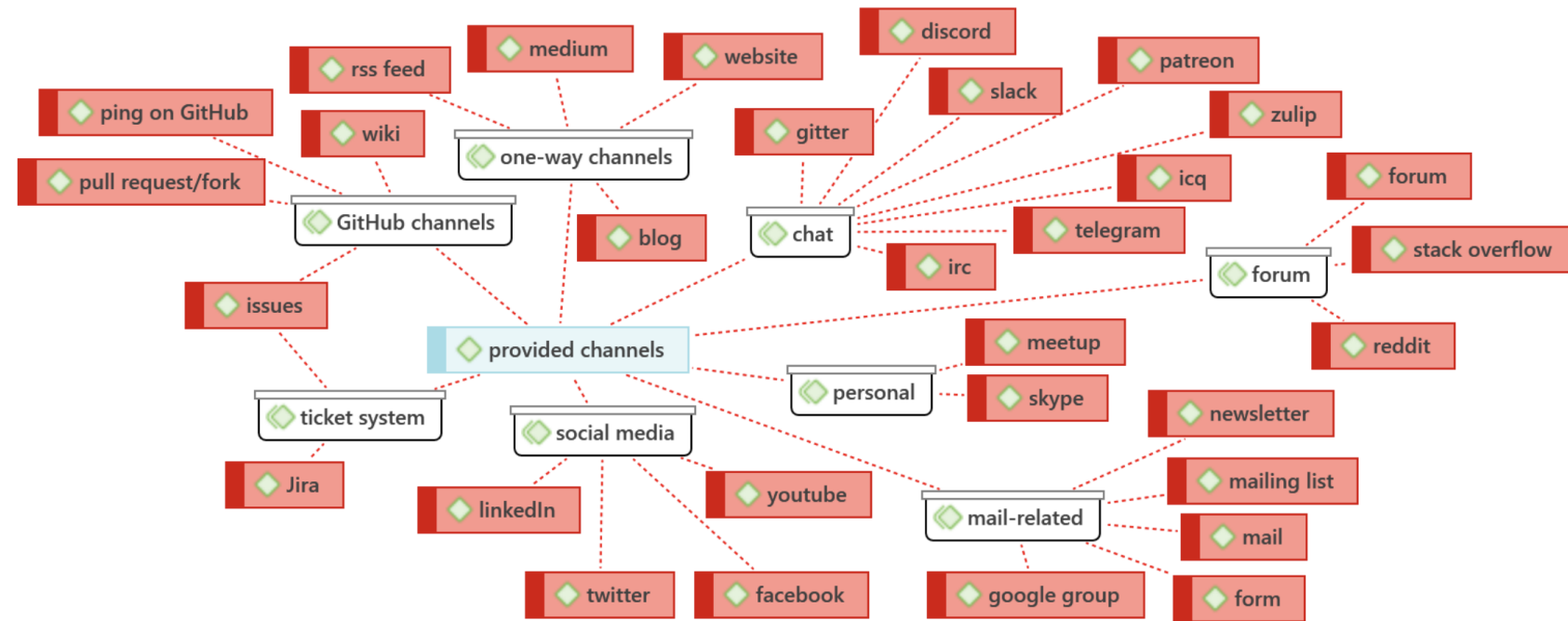
Table 4. Student Attitudes Toward Face-to-Face and Electronic Discussion: Average of Likert-Scale Responses, Maximum=5



VERENA EBERT

“Developers use many channels. Previously, mailing lists were very common. Nowadays, other communication channels become more and more popular, for example, Slack, issue trackers, Twitter or Gitter.”

— Verena Ebert, Daniel Graziotin, and Stefan Wagner. How Are Communication Channels on GitHub Presented to Their Intended Audience? — A Thematic Analysis. In *Proceedings of the 26th International Conference on Evaluation and Assessment in Software Engineering*, pages 40–49, 2022.
[doi:10.1145/3530019.3530024](https://doi.org/10.1145/3530019.3530024)



More about it: Yegor Bugayenko. Eight Levels of Communication Maturity. <https://www.yegor256.com/160823.html>, aug 2016. [Online; accessed 07-02-2024]

7. Be aware of robots!



NATARAJAN CHIDAMBARAM

“Collaborative software development through GitHub repositories frequently relies on bot accounts to automate repetitive and error-prone tasks. This highlights the need to have accurate and efficient bot identification tools.”

— Natarajan Chidambaram, Tom Mens, and Alexandre Decan. RABBIT: A Tool for Identifying Bot Accounts Based on Their Recent GitHub Event History. In *Proceedings of the 21st International Conference on Mining Software Repositories*. ACM, 2024. doi:[10.1145/3643991.3644877](https://doi.org/10.1145/3643991.3644877)



8. Be polite, especially when you are angry or disagree [Bugayenko, 2020].



XUAN LU

“Developers who use emojis in their posts are significantly less likely to dropout from the online work platform.”

— Xuan Lu, Wei Ai, Zhenpeng Chen, Yanbin Cao, and Qiaozhu Mei. Emojis Predict Dropouts of Remote Workers: An Empirical Study of Emoji Usage on GitHub. *PLOS One*, 17(1), 2022. doi:[10.1371/journal.pone.0261262](https://doi.org/10.1371/journal.pone.0261262)



THOMAS FACKLER

“Our results show that there is gravity in online collaborations on GitHub. Traditional determinants of international trade such as language barriers and country borders matter for international code contributions.”

— Thomas Fackler and Nadzeya Laurentsyeva. Gravity in Online Collaborations: Evidence From Github, 2020



“The conflict exerted a strong and persistent negative effect on the overall Ukrainian-Russian collaboration as measured by Ukrainian contributions to Russian projects and vice versa. The effect is symmetric on the extensive margin. However, on the intensive margine, Ukrainian programmers react stronger: conditional on collaborating with Russians, they contribute to fewer Russian projects.”

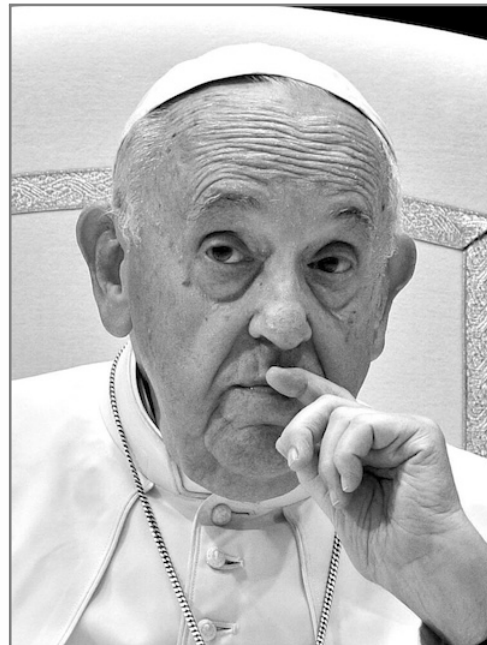
— Nadzeya Laurentsyeva. From Friends to Foes: National Identity and Collaboration in Diverse Teams, 2019



JUSTIN MIDDLETON

“While we indeed find support for the idea that increases in activity correlate with a higher probability for membership, we also found the particular cases for which more activity can reduce the probability. This underscores the notion that software collaboration is much more than the code itself and that the social components of software should not be undervalued by software teams.”

— Justin Middleton, Emerson Murphy-Hill, Demetrius Green, Adam Meade, Roger Mayer, David White, and Steve McDonald. Which Contributions Predict Whether Developers Are Accepted into Github Teams. In *Proceedings of the 15th International Conference on Mining Software Repositories*, pages 403–413, 2018. doi:[10.1145/3196398.3196429](https://doi.org/10.1145/3196398.3196429)



“Pope Francis offered some Valentine’s Day advice Friday for a lasting marriage, telling 25,000 lovebirds that the recipe for success lies in saying three simple words: ‘Please, thanks and sorry.’”

— Nicole Winfield. Pope’s Advice to Couples: Say ‘Please, Thanks and Sorry’, feb 2014

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