Google Confirms Massive Gmail Update—Here's What It Means For You

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Massive Gmail security update should reduce spam like nothing before SOPA IMAGES/LIGHTROCKET VIA GETTY IMAGES

Google has quietly introduced what it says is the largest security upgrade in years for Gmail users. It also represents a radical change in the way users are protected. Here's what the AI-powered update will do.

The Resilient & Efficient Text Vectorizer might not sound very exciting even when you factor in the machine learning powering it. But Google says that RETVec represents one of the "largest defense upgrades in recent years" as far as Gmail is concerned, and that's great news for the 1.8 billion users of the largest email app on the planet.

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What Is RETVec?

In a posting to the Google Security Blog, Google's cybersecurity and AI research director, Elie Bursztein, along with software engineer Marina Zhang, go into detail as to how RETVec works and the implications for users.

Gmail relies upon text classification models to feed the identification of emails that are delivering harmful content and flag them as dangerous spam. From a security practitioner's perspective, filtering phishing emails with malicious links is one of the best defenses the average email user has. "These types of texts are harder for machine learning models to classify," Bursztein and Zhang write, "because bad actors rely on adversarial text manipulations to actively attempt to evade the classifiers." One of the ways they do this is by using "homoglyphs, invisible characters, and keyword stuffing to bypass defenses."

AI To The Rescue

This is where RETVec comes into play. This multilingual text vectorizer aids those machine learning models and moves them

toward classification nirvana while reducing the computational costs in the process. The actual numbers are impressive: spam detection improves by 38% when using RETVec to replace the old Gmail text vectoriser, and the false-positive rate falls by 19.4%. As for the computational costs, equally impressive numbers emerge. In terms of Tensor Processing Units, the custom integrated circuits used by Google to accelerate machine learning workloads, usage is reduced by 83%.

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When Will The RETVec Gmail Security Update Reach Me?

The best news, however, is that you don't have to wait to start seeing the benefits of RETVec if you are a Gmail user. Google has been testing it across 2023, but confirms that it has now been rolled out to all Gmail users in a quiet but massive security upgrade.

"Over the past year, we battle-tested RETVec extensively inside Google to evaluate its usefulness and found it to be highly effective for security and anti-abuse applications," the Google security

update posting states, "making the RETVec deployment one of the largest defense upgrades in recent years."

Personally, I've seen an uptick in the false-positive rate. However, that could be because my emails tend to contain a lot of security-related content, which throws up red flags for very good reason. Let me know in the comments if you have seen an improvement in Gmail spam detection in recent weeks.

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Davey is a four-decade veteran technology journalist and contributing editor at PC Pro magazine, a position he has held since the first issue was published in 1994. You... **Read More**

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