

VERIFIED

Microsoft's open 'ElectionGuard' SDK aims to secure democratic elections

ElectionGuard is open source and built to make sure votes are verifiable, secure, and auditable.

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At its Build 2019 developer conference, Microsoft today announced an open source tool for helping to protect elections. Called "ElectionGuard," the software development kit (SDK) is focused on making sure that votes are verifiable, secure, and auditable.

In terms of verification, ElectionGuard enables voters to track their votes through a web portal with a unique code; they can also optionally confirm that their votes were correctly tabulated and not altered or tampered with, and properly counted. The ElectionGuard SDK will also allow anyone to build their own election verifier, allowing news media, observers, voters, and candidates to confirm votes were accurately recorded.

To secure things, Microsoft is using a type of encryption called "homomorphic encryption." With a lot of the work done by Microsoft Research to make it work in election systems, homomorphic encryption allows "mathematical procedures – like counting – to be done with fully encrypted data." From Microsoft:

“ By running an open election verifier, anyone can securely confirm that the encrypted votes have been correctly aggregated and that this encrypted tabulation has been correctly decrypted to produce the final tally. This process allows anyone to verify the correct counting of votes by inspecting the public election record while keeping