

Project Proposal:

Onion Services, Implementation and Effectiveness

Onion services are anonymous network services that are exposed over the Tor network.

In my project, I will study how onion services are implemented, as well as try to get an understanding of how users in general perceive, understand, and use onion services.

I will also be looking at the implementation and effectiveness of onion services, and the tor network. Tor itself stands for 'The Onion Router', and it's a piece of open source software that's supposed to be used for anonymous communication. This works by basically funneling your requests through a volunteer based overlay network, which is made up of 6000 relays, which ideally masks what you're doing from anybody monitoring network activity. Onion services themselves are private and generally not indexed by search engines.

There's a lot of different uses for onion services, so I'd want to look into possible uses and actual uses. I'd also want to look into the strengths and vulnerabilities of onion services, and best practices for using Tor. Ideally I'd construct my report into seven parts; part one on the background of the tor network, part two on how onion services work (and how to access them), part three on the strengths of onion services, part 4 on the vulnerabilities of tor, part 5 on the best practices for staying anonymous while using tor, part 6 on if "true" anonymity is possible with tor, and part 7 will be on analyzing/deconstructing what people use Tor for.