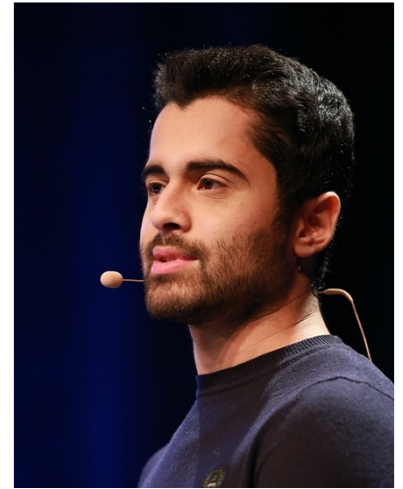


# Mustafa Al-Bassam

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## Introduction

The software engineer I have chosen to write about is Mustafa Al-Bassam. While not typically recognised as an inspirational or influential programmer, his work as a driving part of Anonymous and co-founder of hacking group LulzSec has had wide reaching impacts from aiding revolution in the Middle East to uncovering government surveillance in the US. His hacktivism has been controversial and has been criticised by many, even landing him a suspended prison sentence at the age of 16, however his use of software engineering for political activism has inspired me into believing that programming is not just a skill that will land you a good job or the ability to build software for companies but the ability to instrument positive change in far-reaching aspects of society.



Mustafa Al-Bassam speaking at an Information Security conference in 2017

Born in Baghdad, Iraq in 1995 and migrating to London at 5 years old, Al-Bassam began programming websites at the age of 7 before advancing onto basic website exploitation at the age of 11. Clearly a talented programmer and spurred on by the unrest that was occurring in his home country of Iraq, Al-Bassam became fascinated by political activism and the intersection of his two passions and joined Anonymous. As part of the decentralized, international hacktivist collective Anonymous, and later as a co-founder of the black hat computer hacking group LulzSec, Al-Bassam worked on many projects including Operation Tunisia, HBGary and various high-profile hacks into Sony, Fox and PBS among others. While not all of his hacks had worthy causes, the ones that did had a tangible impact on many peoples' lives, in particular in the middle east where his hacking work for revolution forces helped many escape constant monitoring and manipulation from their government.

## Hacktivism

Al-Bassam's main contribution to the software engineering community came in the form of hacktivism. He used his considerable programming skills to uncover mass government surveillance in the US using snippets of SQL and injecting to into an FBI contractor's website.

HBGary Federal is a computer security company that sells its services to the US Federal Government exclusively. In 2010, it's CEO Aaron Burr alleged that he could use social media to gather information on hackers and that he had used his techniques to infiltrate Anonymous and planned to sell the identities of its members to possible clients, including the FBI. In response to these claims Al-Bassam, alongside other members of Anonymous,

compromised the HBGary website after quickly finding a gaping vulnerability in the custom-made CMS (content management system) and exploiting it to copy tens of thousands of documents and company emails. These documents showed that the US Chamber of Commerce had, illegally, contracted the firm to spy on and discredit unions and liberal groups alongside other nefarious requests from various governing bodies in the US. The documents revealed from the hack generated significant public and media interest and pressured the government to explain these emails. This pressure eventually led to a federal investigation by a group of Democratic congress members which concluded that tax dollars were being used to fund tools and programs to spy on Americans and quell First Amendment rights. These emails and subsequent findings went on to inform new legislation regarding online privacy laws and helped ensure First Amendment rights in the US, something that millions of Americans unknowingly enjoy every day.

Al-Bassam's work into HBGary Federal was internationally recognised and landed him a place on the technology Forbes 30 Under 30 List in 2016 for his work on uncovering government surveillance.

## Other work

Prior to his work on HBGary Federal, Al-Bassam was an instrumental part of the Anonymous group who worked with the Tunisian opposition forces to help the people on the ground bring about a revolution against their oppressive ruler, Ben Ali, who had been ruling as a dictator since 1989. Operation Tunis, as it was later named, uncovered the Tunisian government's malware that was being injected into the login pages of Facebook and Gmail, so that the government could collect login details to monitor, manipulate and coerce rebels participating in the Arab Spring. The government had also blocked websites of dissident bloggers and any website mentioning WikiLeaks and the leaked cables incriminating Ben Ali in a show of blatant disregard of free speech. Al-Bassam, alongside many of his fellow anonymous members were outraged, and Al-Bassam helped lead the DDOS (Distributed Denial of Service) attack against the websites of the Tunisian prime minister and his corrupt government, the stock market and the primary DNS server of Tunisia, while also ensuring that Tunisians could connect anonymously to the uncensored internet, and access information that their government did not want to see.

These attacks significantly hampered the efforts of the government to crack down on protestors and marked a very real impact and progression for the Tunisian people.



## Arrest & Reform

Just one year after Operation Tunisia, Al-Bassam was arrested over hacks into Sony, PBS and Fox News. Being just 16 at the time, he was charged as a minor and only received a two-year suspended sentence alongside various other preventative measures. His arrest marked the end of his hacking days, publicly at least, and he focused his attentions on getting a degree, first a Computer Science degree from Kings College London and later a PhD in Information Security from UCL. He now serves as an information security consultant for world leading companies after selling his start-up Chainspace, a smart contract platform, to Facebook in 2019.

## Conclusion

Mustafa Al-Bassam made his most significant contributions to software engineering as a minor but despite this, his work, alongside that of his fellow Anonymous and LulzSec members, has been immortalised in multiple books, documentaries and more importantly in the minds of much of the public. While his code may not have been revolutionary, the way in which he used it definitely was and has inspired a new generation of activists passionate about using software engineering as a means of political activism.

In a world in which new and exciting software developments are lauded above all else, it is important that we also celebrate those who take the time to look back, like Mustafa, and those who ensure that developments are being used ethically and more importantly how we can leverage these development for a more equal and just society.

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