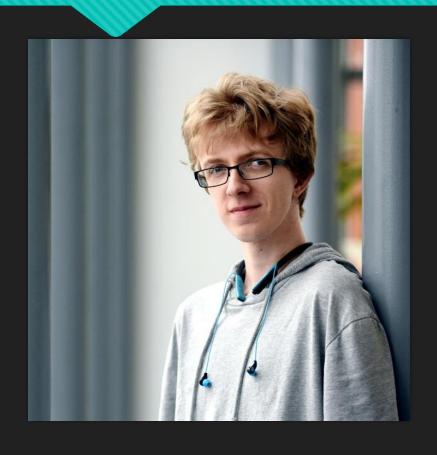# Taking a Proactive Approach to Security

By Saul Johnson

A (Very) Brief Introduction

- I'm Saul, a final-year Ph.D. student and software verification researcher currently employed as a lecturer at at Teesside University.

- My field mainly deals in mathematical models for software security, but I also wotk on aspects of applied cybersecurity.

- You can learn more about my research at: https://sauljohnson.com/

- Slides from this talk are all available on my blog: https://blog.sauljohnson.com/

Let's get right in to an example…

We're going to step into the shoes of a user, who has just received an email from Google…

What could we have done?

What could we have done to avoid falling victim to this attack?

What could we have done? (cont.)

- **The green padlock is not what it seems:** all it tells us is that the information we send to the website can't be read by anyone along the way. It <u>doesn't</u> tell us that we're on a trustworthy website.

- **google.sauljohnson.com is not a Google domain!** It's a <u>subdomain</u> (a smaller domain inside of) sauljohnson.com. Google doesn't control it, I do!

- **Know where you are at all times:** watch for the domain name (the 'handelsbanken' in 'handelsbanken.com') and be wary of deceptive subdomains; 'handelsbanken.sauljohnson.com' is not a Handelsbanken website!

- **Phishing e-mails can be very crafty:** scammers might know your email address, phone number, full name, account number, even street address. If you're a high-profile employee/executive you're especially likely to be targeted with highly tailored "whaling" or "spear phishing" attacks.

Have we been pwned?

The term *pwned*, in information security circles, means to be compromised.

While we might not be happy with what we find, we must ask ourselves a question. Have we been pwned?

Troy Hunt, an information security professional from Australia, has a servicd called "Have I been pwned?" for just this purpose.

Given your email address, it'll tell you what information it has found floating around in the public domain about you.