



# Protecting Software During its Life Cycle

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# Context & Motivation

- CCleaner Attack
  - Over 2 million computers
  - Remote code execution
  - Bypassed anti-virus software





# Scale

- Global issue
  - Over 32 Million people in Canada use internet <sup>[1]</sup>
- Equifax data breach
  - Over 8,000 people implicated
  - Personal Information (SIN, Name, Date of Birth)

[1] Statista, *Number of internet users in Canada from 2000 to 2016 (in millions)*. Available: <https://www.statista.com/statistics/243808/number-of-internet-users-in-canada/>.



# Who?

- Personal consumers
  - Cellphones
  - Laptops
- Companies & Enterprises
  - Large scale servers
  - Company laptops
  - Version control software private servers



# Why?

- Personal consumers
  - No backup (ransomware)
  - Less secure system
  - Personal info (Identity theft)
- Companies & Enterprises
  - Employee info
  - Key info leak (source code & private keys)
  - Company secrets leaked



# How?

- Writing security based requirement
- Security oriented designs
- Coding best practices
- Testing software
- Deployment & Maintenance



Thank You