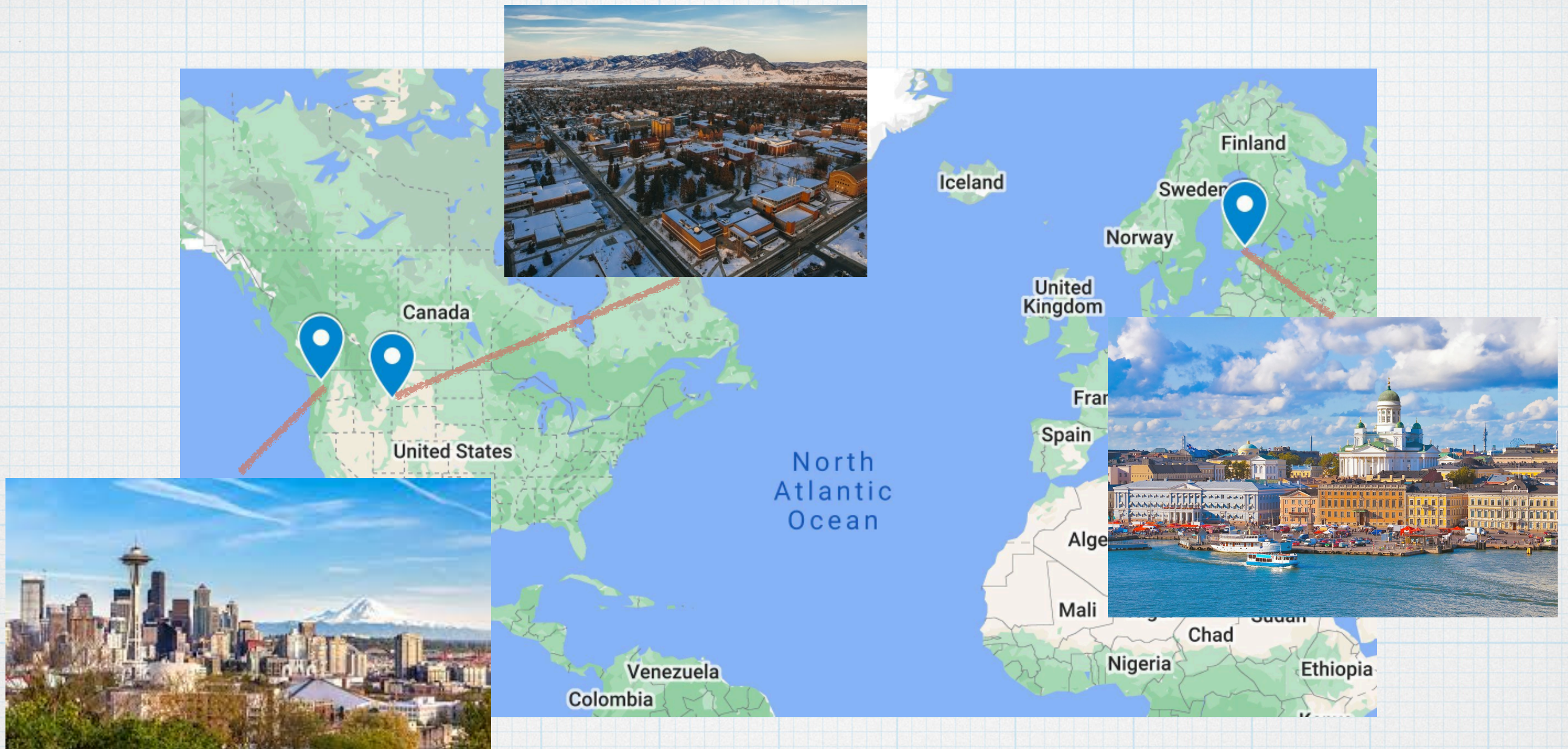


Data Breaches

What they are & what you can do to prevent them

Lucy Williams
Teaching Demo, October 25, 2021



Undergraduate: Applied Math

Industry: Data Scientist

PhD: the computer science behind DNA sequencing

Learning goals

- * Understand what data breaches are
- * Learn concrete steps you can take to prevent them

What is a data breach?

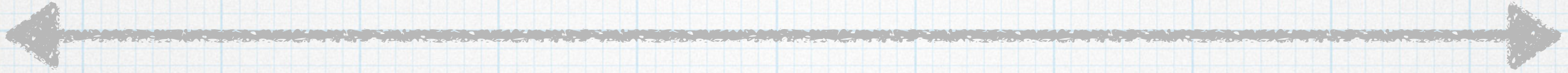
Exposure of **confidential, sensitive,**
or **protected** information to an
unauthorized person

Examples

- * Equifax, Yahoo, Facebook, ...
- * Ashley Madison, Adult FriendFinder
- * VTech

Poor security practice

Sophisticated hack



Missouri
education
website

Equifax

Facebook

Adult
FriendFinder

Ashley
Madison

VTech

SolarWinds

What can you do?

- * Check Have I been pwned?
- * Check Pwned Passwords
- * Understand your threat model

Threat models

- * What systems do I use?
- * (In your career, maybe this will be “what am I building?” instead.)
- * What could go wrong?
- * What should I do about the things that could go wrong?

What can you do?

- * Don't use reused or guessable passwords
- * **Use a password manager!** LastPass is free
- * Use multi-factor authentication
- * Keep your software up to date
- * Study computer science and computer security



Thank you!

Find me at:
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spring)

Citations

- * Teaching Security project
- * Troy Hunt
- * Travis Peters' computer security course videos
- * Data breach write-ups on Wikipedia