R PACKAGE DEVELOPMENT AND VALIDATION

Welcome and Orientation

Welcome

◦ Who are we

◦ Why are we here

◦ How are we going to get there

◦ When is this going to be done

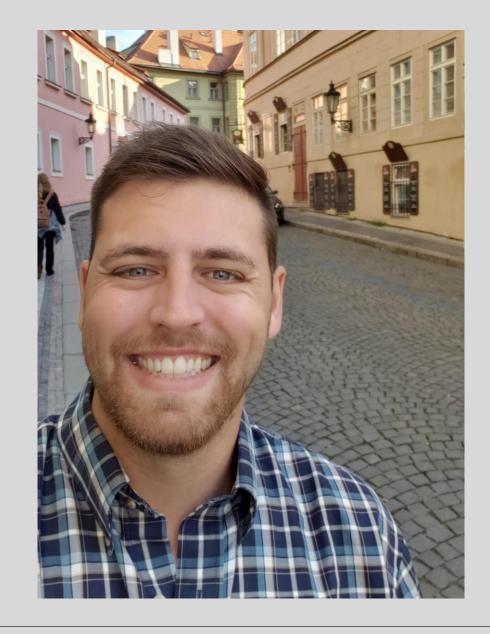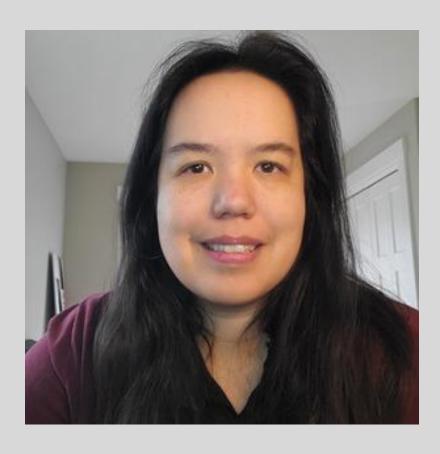◦ Where do we go from here

WHO ARE WE

Ellis Hughes

- Statistical Programmer
  - Statistical Genetics
  - Vaccine Research

- Community
  - Seattle UseR
  - Cascadia R
  - R/Pharma
  - TidyX Screencast

🐦 @ellis_hughes

⬛ thebioengineer

Marie Vendettuoli

- ◦ Statistical Programmer
  - ◦ R package developer
  - ◦ Industry & gov regulatory experience
  - ◦ Recovering wet lab scientist

 mariev

 www.linkedin.com/in/mvendettuoli

 @mvendettuoli

WHY ARE WE HERE

Workshop Goals

1. An understanding of basic package development
   - Structure
   - Function writing
   - Documentation

2. How to Validate an R Package
   - what is validation
   - the R Package validation Framework
   - {valtools} R package

Workshop Code of Conduct

Review the [Cascadia R Conference Code of Conduct](https://cascadiarconf.com/policies/)

- https://cascadiarconf.com/policies/

Issues can be brought to our attention by

1. contacting an organizer
2. email cascadiarcon@gmail.com

Do not record this workshop to respect the privacy of others.

We do this to create an open, collaborative space where people can feel comfortable to learn and grow.

HOW ARE WE GOING TO GET THERE

Workshop Materials

bit.ly/R_Validation_Tutorial

Slides folder contains presentation slides

Materials folder contains exercises 2 types of exercises: Spartan or Verbose

Workshop slides and exercises are online now and will be available after the conference too.

Slack Chat

bit.ly/cascadia_validation_slack

- Polls to understand where the everyone is on the examples

- Pose questions for the instructors to answer
    - Alternatively, directly message one of the instructors

- Pose questions to the rest of the class

WHEN ARE WE GETTING THERE

Workshop Schedule

Time	Section	Content
10:00-10:10	Welcome and Orientation	
10:10-11:20	Package Elements & Structure	Package Elements & Structure
		Package Documentation
		Deploying R Packages
11:20 - 11:30	Break	
11:30 - 12:00	Concepts of R Package Validation	Introduction to the R Package Validation Framework
12:00 - 1:30	Lunch	
130 - 2:30	Introduction to {valtools}	Intro to {valtools}
		Structure of Test Cases and Code
		Elements of a Validation Report
2:30- 2:40	Break	
2:40-3:10		Re-Validating a Package
3:10 -3:30	Closeout	

WHERE DO WE GO FROM HERE

What if this is too much?!

What if this is too basic?!

What if I find an issue in the documentation?

What if I get stuck?

What if we are in the middle of a pandemic, there are killer bees, and ...!?

READY?
LETS GO!

Clone https://github.com/FredHutch/R_Package_Validation_Tutorial