

Welcome to this Training Session with Theiagen Genomics



We will soon be getting started



Software Development Practices for Public Health Bioinformatics

Week 00: Training Kick Off!

Western Region WFD Offering Provided by the
Washington State Department of Health in Collaboration with Theiagen Genomics

Course Introduction

Training Workshop Instructors



Kevin G. Libuit, MS



Andrew Lang, PhD

Training Workshop Resources

Training Information, Communication, and Support

- **GitHub Repo** created to host training resources and information:
 - <https://github.com/theiagen/Western-WFD-2024>
- **Support contact:**
 - support@theiagen.com

Training Objectives

Software Development Practices for Public Health Bioinformatics

- Develop a **comprehensive understanding** of software development processes
- Gain comfort in the use of **development tools and version control systems** for effective code management
- Learn to apply **testing and deployment strategies** to ensure code quality and stability
- Explore advanced tools and **APIs for data management** and workflow automation

Training Format

Virtual Training Workshop

All sessions hosted via Zoom. Below are key dates for this workshop (all in Pacific Time):

- **Mondays (x4), July 8 - 29, 2024, 9:30 am**
 - Training Lectures & Exercises (90m)
- **Wednesdays (x4), July 10 - 31, 2024, 12:00 pm**
 - Training Office Hours (60m)

*All participants should have received a
Calendar invite with Zoom call-in information*

Course Agenda

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Week 1 - 3: Software Development Practices

Focus on the development life cycle and best practices for sustainable bioinformatics solutions

- Will consist of both live lectures and hands-on exercises

Week 4: Advanced Terra Usage

Focus on programmatic access to the Terra platform

- Will consist of both live lectures and a live demo
 - *A hands-on exercises will not be possible for this activity as it requires individual set up of GCP credentials*

Course Agenda

Software Development Practices

Week 1 - July 08/10, 2024

- Introducing the development journey with a focus on design documents a development environments

Week 2 - July 15/17, 2024

- Focus on Git fundamentals and collaborative development practices

Week 3 - July 22/24, 2024

- Focus on testing and bringing code modifications into production

Course Agenda

Advanced Terra Usage

Week 4 - July 29/31, 2024

- Focus on programmatic access to the Terra platform
 - Sage Wright to join us during office hours to highlight real-world usage of Terra API to automate workflow launches

Pre-Training Assessment

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5-minute Assessment

Developed to better understand your current understanding of the topics we will cover throughout the training workshop

- Made available as a Google Form:

<https://forms.gle/9Q2s9T1ALo8e4mNy8>

GitPod Access for Hands-On Exercises

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Prerequisites for Hands-On Exercises

In addition to lectures, this course consists of several hands-on exercises to reinforce the coursework material. To participate in these exercises, trainees will need the following resources:

1. GitHub Account
2. GitPod Account
3. GitPod Configuration for Public Repositories
4. GitPod Workspace

Detailed instructions for setting these up are available in our course [GitHub repository](#)