Environmental and Water Resources Engineering and Center for Water and the Environment Seminar Series:

Thursday, November 6th 2025 | 3:30-4:30pm | ECJ 1.324

Zoom Link: https://utexas.zoom.us/j/88522939494

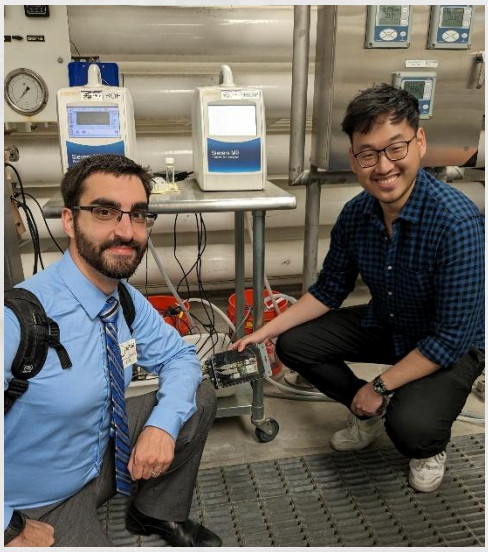
Machine Learning for Environmental Engineers

Kyle Thompson, PhD

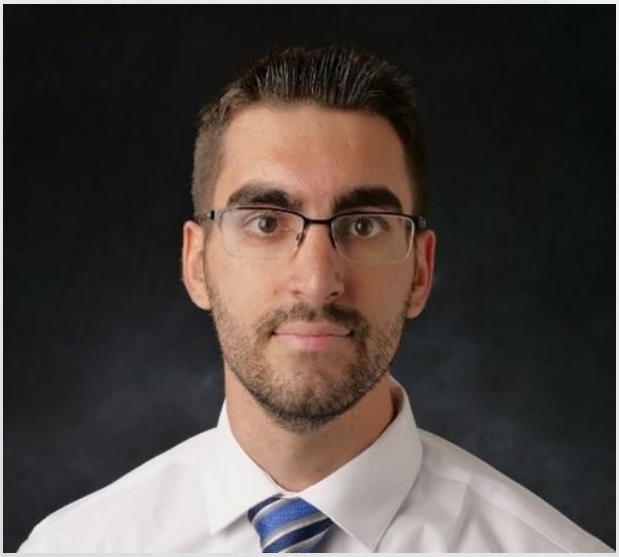
Carollo Engineers

Ph.D. in Environmental Engineering from the University of Colorado, Boulder

This presentation will give an overview of machine learning (ML) with a focus on environmental engineering applications. Speaker will discuss how ML is useful for civil and environmental engineers, including in both the design and operation of water treatment and conveyance systems. We will cover how to learn ML, including common programming languages or platforms. We will compare conventional machine learning and traditional modeling. We will discuss how much data is needed for ML, and how to check if models are truly good or overfit. We will discuss ways of visualizing ML results for communication and understanding, as well as risks of overreliance on blackbox models.



About The Presenter



Kyle Thompson

Reuse Technologist and the Innovation Program Manager, Carollo Engineers

Kyle Thompson is a Senior Reuse Technologist and the Innovation Program Manager at Carollo Engineers. His areas of expertise include PFAS, potable reuse, and machine learning. Kyle received his BS in environmental engineering in 2013 from Missouri University of Science & Technology as valedictorian. He received a Master of Science in Civil Engineering and PhD in Environmental Engineering at the University of Colorado Boulder. He is a Professional Certificate in Data Science from Harvard. Kyle is a registered Professional Engineer in the state of Texas. He has been recognized by the AAEES 40 Under 40 Program.

EWRE Seminar Committee Members: Abby Chapman, Becky Cantrell, Connor Coolidge, Julia Barkelew, Tzu-An Lee