USCOTS Abstract

Presentation Title:
Talking in Code: Code Review as a Form of Communication

Goals:

- Gain awareness of code review as method of student communication (in teams and with clients)
- Provide resources and pedagogical practices to implement peer code review in the classroom
- Gain insight into students' project workflows and skills gained through code review

Abstract:
As coding and computation increasingly permeate statistics and data science courses, it is important for students to not only learn coding syntax and language, but also how to communicate with other data scientists. Code review implements a consistent feedback loop between coder and reviewer(s) to systematically assess code quality and enhance team communication. While code review is a commonplace in industry, it is not often implemented in data science classrooms. The NSF-funded DSC-WAV project is a semester-long paid data science experience that pairs teams of undergraduate data science majors with local community and non-profit organizations to work on a data-focused problem typically involving wrangling, analysis, and visualization. To introduce the code review process, we developed a set of resources that were distributed to students midway through their project. Two DSC-WAV teams were surveyed about their workflow, habits, and processes related to code review. Interviews with the teams' faculty advisors provided insight into their promotion of code review resources and an informal assessment of skills gained by students. This poster presents results from these data in an effort to learn about how students utilized the materials, their code review habits and processes, and how they communicate via code review.