Adopting Git and GitHub within Teaching: A survey of Tool support

**Abstract**

The adoption and use of Git and Github within computer science education is growing in popularity. The motivation for this shift is strong: it combines a robust system for managing student coursework, sophisticated collaboration and communication tools for students and teaching staff, and an authentic experience of an important software engineering skill. Whilst previous literature has reported upon experience and benefits, there still exists a technical barrier to overcome in adopting Git and Github within an educational context. In response, both the community of teachers using Git/Github and the Github organisation itself have developed tool support to help solve the challenge of adoption, however these efforts are somewhat isolated and relatively unstudied. This work aims to provide an overview of these tools, identify the commonalities and differences, and develop a framework for comparison to assist teachers when looking for solutions for their own courses.