

Thesis Project Portfolio

Asynchronous Workflow: How to Speed up a Bulky Task

(Technical Report)

Teaching to Different Types of Learners

(STS Research Paper)

An Undergraduate Thesis

Presented to the Faculty of the School of Engineering and Applied Science
University of Virginia • Charlottesville, Virginia

In Fulfillment of the Requirements for the Degree
Bachelor of Science, School of Engineering

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Sociotechnical Synthesis

My capstone research is unrelated to my STS research; it involves my experience as an intern within the Technology Internship Program at Capital One. Computer Science majors in the Engineering School choose between writing about research conducted during their time at the university, or a project worked on during a past internship - I chose my time at Capital One. The paper discusses the project my team worked on, including the problem/motivation, potential solutions, technologies used, and results.

My capstone paper addresses my experience at an internship with Capital One, describing the work done and motivation for that work - the specific problem my team worked on during the internship was changing a synchronous spreadsheet upload process to an asynchronous one. AWS technologies such as S3 or SQS were used to address this problem. It is important to consider the human and social dimensions of this process because the users of this product, Capital One employees, will be utilizing the product to upload spreadsheets about data for their team. They must be satisfied with the results, i.e. able to upload any size at a fast enough speed. Technology Determination is an STS theory that could apply the problem solving approach, as the solution relied heavily on existing AWS technologies; finding a solution based on AWS technologies could increase reliance and influence of other technology companies on our team's work. My STS research, which is unrelated to the Capstone project, will be conducted through the Literature Review research method. This research regarding Learning Styles will lead me to understand the larger sense of the use of Learning Styles in Education today, along with where Learning Styles are going, and if its use is worth pursuing in further research and practical applications. There are no implications from the interaction of my capstone and STS research

because they are unrelated. However, the implications of my capstone project is a greater understanding of the problem-solving process Capital One uses, and the implications of the STS research involve whether the consideration of Learning Styles in large-scale curriculum is worth pursuing.