# Adding Context to Theoretical Computation: A Proposed New Unit to UVA's Theory of Computation Course

(Technical Report)

# Read Receipts and Anxiety: Text Communication and Social Consequences

(STS Research Paper)

An Undergraduate Thesis Portfolio
Presented to the Faculty of the
School of Engineering and Applied Science
In Partial Fulfillment of the Requirements for the Degree
Bachelor of Science in Computer Science

by

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## Preface

In mobile messaging platforms, read indicators can affect users who experience social anxiety. Computer science students learning nondeterminism can apply it in real world model-based software testing. These problems have important implications in software development.

Many computer science students struggle to understand the practical applications of theoretical computation in their careers. Examples illustrating its utility were identified to form a new class unit discussing these applications. New class materials were developed to teach and assess the learning of nondeterminism in software testing.

In interpersonal text communication, read receipts have complex effects. Developers should consider the effects of their decisions on communication subcultures. Surveys and interviews were conducted to examine university students' relationship with read receipts on mobile messaging platforms. The results indicate that shifts in users' perceptions can depend upon users' preexisting social anxiety. Even low-anxiety users are prone to distress when read receipts subject them to social pressure. Users recognize value in read receipts, but overwhelmingly prefer to retain some control over the feature to improve their conversation experiences and reduce stress.

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