

# Exploring Turing Machine Simulations on Social Machines

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## Problem

Modern day computation no longer only involves machines performing deterministic operations; there are cases where human input is an integral part in the completion of a certain task or advancing through a continuous process. With the rise of the World Wide Web people have been prompted to not only interact with each other online, but with systems they can contribute to. Such systems can be classified as social machines, as the dependency of their states on the non-deterministic nature of human participants conveys the interweaving of computer logic with real-life knowledge.

## Goals

This project aims at finding a way to simulate such environments, thus evaluating the feasibility of modelling social machine components using Turing machine simulations. There are three major stages this objective has:

- Gather a selection of models and classification frameworks to formally define the different behaviours of each component implementation
- Extend an existing open source Turing Machine simulation framework with implementations of these extra models
- Assess the performance and accuracy of these simulations based on theoretical input scenario data or example data if such is available.

## Scope

It's difficult to define the scope of a project surrounding an emerging field such as social machines. The scope and selection of goals for this project may change substantially over its course dependant on the amount of prior research, data and code available. With that said, we shall limit this project to a gathering, evaluation and implementation of existing techniques and models rather than attempt to define a new set of standards. An extensive literature review on the base concepts behind social machines and their possible simulation will need to be carried out first and then, dependent on the amount of algorithmic information and data available, the amount of implementation and subsequent review will be balanced accordingly within the allocated timeline.