# DAT530
# Discrete Simulation and Performance Analysis
# Final Project
# Solitaire game strategy

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**Abstract.** SKRIV DETTE TIL SLUTT!

## 1 Introduction

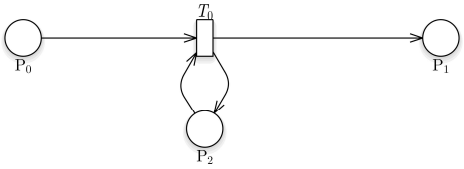
This project aims to study the popular card game, Solitaire[Site]. Solitaire is bundled with most Windows[Site] installations, as well as being available for free on several sources. It is also easy to play the game with a physical card deck. A detailed explaination of the games rules can be found in the next chapter, Solitaire Rules[REF]
Since the game utilizes all 52 cards of the deck, the number of possible initial game states is 52!, which is a very high number. A large number of these inital game states can be merged, as they offer no difference in the difficulty to solve. Some of these intial states are unsolvable, but even given a solvable game state, one often find oneself in an unsolvable game state, due to certain actions in the game are non-reversible,. There has been attempts to find the distribution of solvable and unsolvable initial game states [ref]. This is roughly 75 percent are solvable, however the study also shows that only 35 percent of the games are won by an experienced player.
This project contains a complete model of the game, a GUI to play the game, and a basic bot to simulate user actions.

### 1.1 Solitaire Rules

Finite State Machine ?

# 2 Method and Design

## 2.1 Overall Design



```
    def mapper_from_to(self, key, email):
        if 'to' in email.keys() and 'from' in email.keys() and 'body_count' in email.key
```



## References

1. Wikipedia article on Tf-idf. `https://en.wikipedia.org/wiki/Tf?idf`
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3. Docker API Docs, `https://docs.docker.com`
4. Slides from DAT630, Krisztian Balog
5. Kaggle. The Enron Email Dataset. `https://www.kaggle.com/wcukierski/enron-email-dataset`
6. Data Intensive Systems Compendium, Tomasz Wiktorski et al.
7. Source code of all tasks developed. GitLab `https://gitlab.com/mindejulian/projectDAT500/tree/master`