1 Introduction

2 Problem statement

3 Theory

3.1 Bayes theorem

3.2 Monte Carlo simulation

3.3 Nash equilibrium

"Nash equilibrium refers to a condition in which every participant has optimized its outcome, based on the other players expected decision."

This theory works with the assumption that a party knows the other parties strategies. If all parties have an optimized strategy compared to the other parties strategies then this situation is said to be in Nash equilibrium.

In poker this is useful in a situation where your opponent plays really aggressive and goes all-in a lot. Depending on the size of your stack compared to the big blind different hands is profitable to call in order to win the big blind. For this purpose a chart has been created to show which hands are profitable to call depending on the size of your stack. Likewise a