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Formal Languages

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DFA Project Proposal

When the Deterministic Finite Automata project was first introduced to us, I immediately began considering something to do with a gaming application. After seeing the Pac-Man example that was given in class, I began searching for something that could both encompass a gaming application as well as potentially a real-world situation. One of the most intriguing games I have played in the last couple of years is *Papers, Please*. It revolves around the daily job of a border checkpoint security guard in a fictional Eastern European country named Arstotzka, during the Cold War era. The game involves following a given set of rules in order to either accept or deny any person that walks into your booth. While the game begins quite simply, it grows to include many factors and is difficult to master. It is a fascinating experience, and I highly recommend it. Because the purpose of the game is to have the player basically scanning documents against each other/comparing them, I thought it would be a useful application to have a DFA that goes through the same process. While I do not quite understand how to implement this project quite yet, I am hoping that spending some more time in class as well as visiting office hours will help me to understand how to build and expand on this idea. I am hoping that the project I've chosen is not too simple as well as not too difficult. It is hard to gauge, at this point, how complicated a project like this will be, so I hope that I can potentially alter my project idea if it does not meet satisfactory standards. I expect to tweak and refine the idea the more we learn about the subject.