

Eyewitness identification plays an important role during criminal proceedings and may lead to prosecution and conviction of a suspect. One of the methods of eyewitness identification is a police photo lineup when a collection of photographs is presented to the witness in order to identify the perpetrator of the crime. In the lineup, there is typically at most one photograph (typically exactly one) of the suspect and the remaining photographs are the so-called fillers, i.e. photographs of innocent people. Positive identification of the suspect by the witness may result in charge or conviction of the suspect.

Assembly of the lineup is a challenging and tedious problem, because the wrong selection of the fillers may end up in a biased lineup, where the suspect will stand out from the fillers and would be easily identifiable even by a highly uncertain witness. The reason why it is tedious is due to the fact that this process is still done manually or only semi-automatically.

This thesis tries to solve both issues by proposing a model that will be capable of generating synthetic data, together with an application that will allow users to obtain the fillers for a given suspect's photograph.