Problem Definition

The problem that I will be trying to solve is straightforward. It is increasingly important, as more and more of our lives are managed through online systems (emails, banking, social media, etc) that we maintain a high level of security. An important account being hacked could cause a massive disruption to someone's life. As a result, it is incredibly important that we use passwords that are long, complex, and unique. However, the issue with this is that passwords which fit this criteria are incredibly difficult to memorise, especially if you do not use them often. Writing them down would fix the issue of remembering them, but would also create a security vulnerability since anybody who got this list of passwords (whether written on paper or on a computer) would have access to all of your accounts. There needs to be a solution that both allows for complex, unique passwords while also solving the problem of a human not being able to remember them.