Projects proposed by Prof. Esma Aimeur

http://www.iro.umontreal.ca/~aimeur/index_e.html

Project 1: Educational Games for e-learning

This research is taking place in the educational domain and is being done by a Masters student. The project consists in building a "web based" platform that includes an educational program, to develop privacy and security awareness and security for teenagers aged between 13 and 18.

The learning process will use animation pictures and some attractive games to be more user-friendly

The languages used in the platform:

-   For front end: JavaScript, HTML5, jQuery, XML
-   For back end: PHP, MySQL for database management

Proposal project: The student will collaborate in this research by developing simple attractive educating games that can be used and integrated in the platform.

Project 2: Data mining classification to detect DDoS attacks

Denial of Service (DoS) is an attack that aims to make a computer application unable to respond to requests from its users. This type of attack is hugely difficult to block because it is hard to distinguish between a real request and a false one.

Data mining techniques are used to recognise and classify the requests. The new student will help a PhD student in a simulation of a DDoS (Distributed Denial of Service) attack to detect and identify zombie machines.

Project 3: Economics of privacy

Privacy is one of the most important axes of research nowadays, as evidenced when Mark Zuckerberg, CEO of Facebook, faced tough questions in Congress, which were all about selling personal data of Facebook users. After all those problems faced by one of the giants of the web, all the other giants of the web such as Instagram, Google, etc., updated their privacy policies to make it easier for their users to understand how their data is being used.

This field of research started a long time and researchers discovered that personal data has its own commercial value. They called it "economics of privacy". Today, there are many personal data markets, in which data is being sold and bought, whose inception, but that was predicted from the 1990s. There are also black markets of personal data, for instance in China, where you can buy personal data of any person of your choice for only seven hundred yuans (approximately $100 US) based on just the person's ID number. There are even Personal Data Exchange (PDE) platforms, which allow users to own their personal data and monetize them.

Many startups are specialized in buying personal data and selling them to third-parties like Datacoup. Even in the dark web, there is a marketplace for personal data where you can buy everything about an individual.

In this research the student will help a Masters student in building a web application that discovers which personal data is the most important for the users and for what price are they willing to sell their personal data.