Presentation : Ivan Baheux
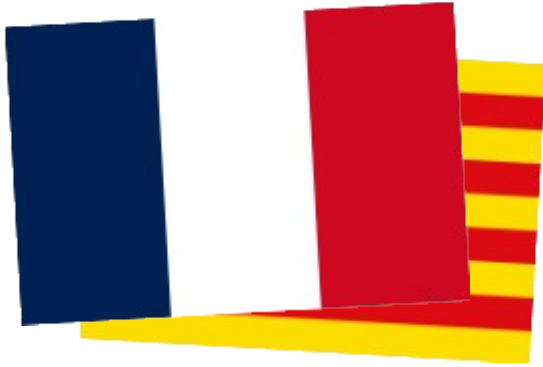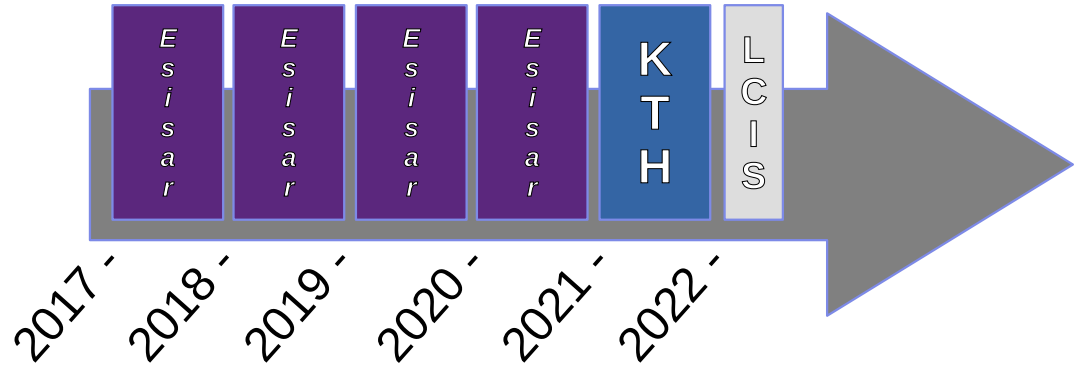
Nationality :

For those that are colorblind :
- The first flag is the French flag
- The other one is the Catalan flag

Esisar — Esisar — Esisar — Esisar — KTH — LCIS

2017 - 2018 - 2019 - 2020 - 2021 - 2022 -

Field(s) :
Computer science, Networks, Cybersecurity
(software security), Privacy.

Ivan : What am I working on ?

At LCIS : Master's thesis (= PFE = degree project ≈ 5 month internship)

Title : ***Context-aware security testing of Android applications***

Objective :
- Expand on the work of Abdallah ADWAN and Mohammed El Amin TEBIB
- Model context-aware attacks on vulnerabilities of the permission system of Android

Progress

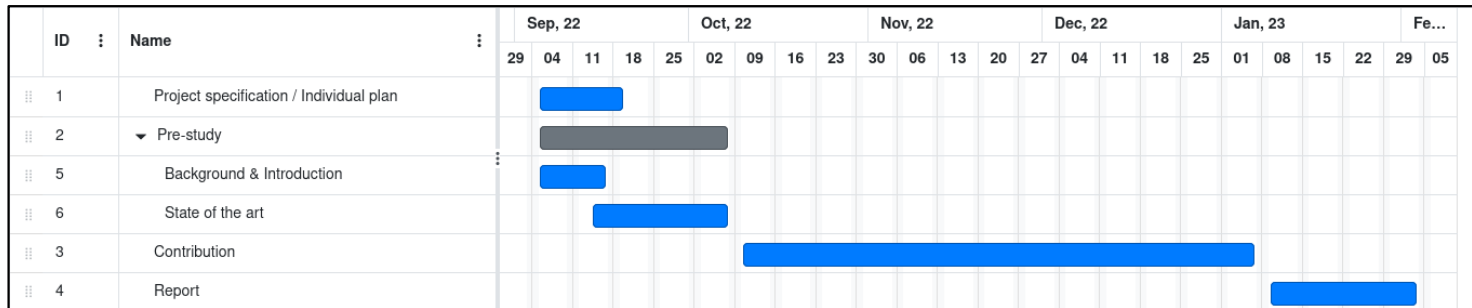Project planning :

To be validated by KTH but mostly done on our part

Figure : Previsional Gantt of the project (15/09/2022)

Progress

Progress on the topic :

$\Longrightarrow$ Study of subject terms :
- Context
- Permission system
- Model-based security testing (MBST)

$\Longrightarrow$ Early work on context-dependent vulnerabilities and on the permission system of Android

Types of vulnerabilities

For the moment 4 possible research axes:
- Vulnerabilities related to context dependent code
    e.g.: If no_wifi() then [Vulnerability].

- Vulnerabilities related to sensor trust / permissions
    e.g.: if scan_face_with_camera() == bank_user_face then ...

- Vulnerabilities related to a delegation of permissions
    ex : Confused deputy attack / Indirect collusion attack

- A combination of the above