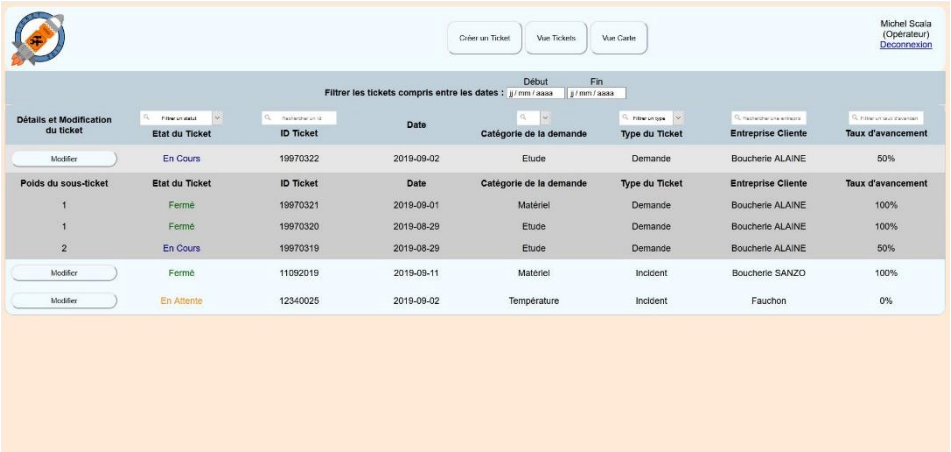
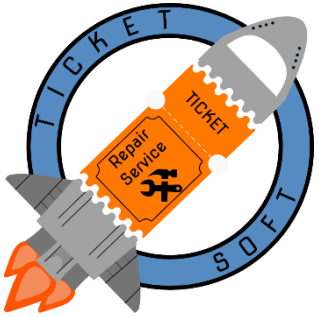
Thomas von Ascheberg‘s Portfolio

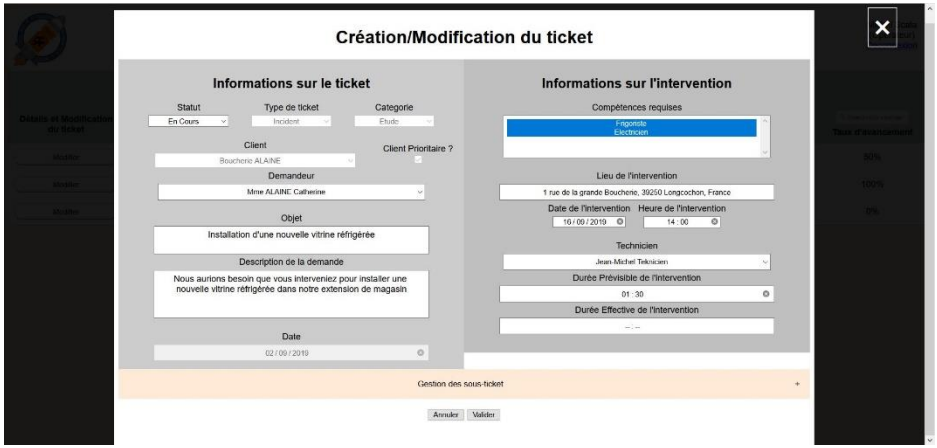
Programming projects from 2015 to 2020

TicketSoft

Sep. 2019 – Mar. 2020





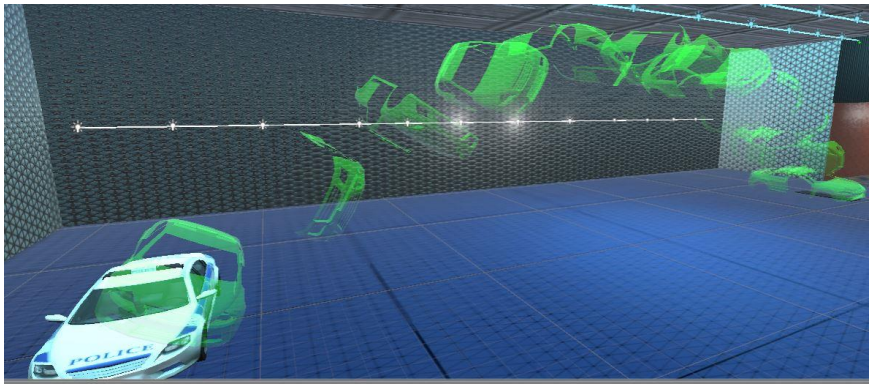


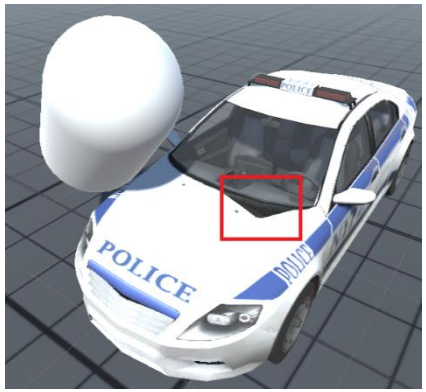
Description :

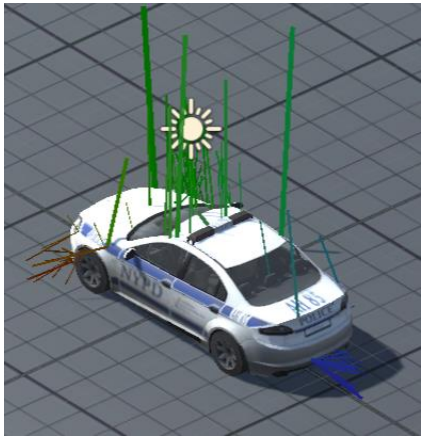
Leading a software engineering team of 6 people for the end of cursus project at Polytech Paris-Saclay. The software was a website dedicated to ticketing issues. It was a great full-stack development and project management experience for me!

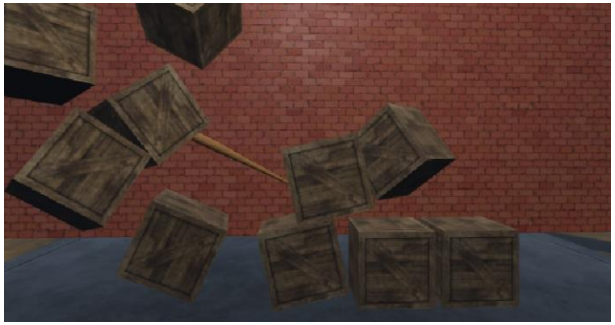
CrashTestVR

Jan. 2020 – Mar. 2020







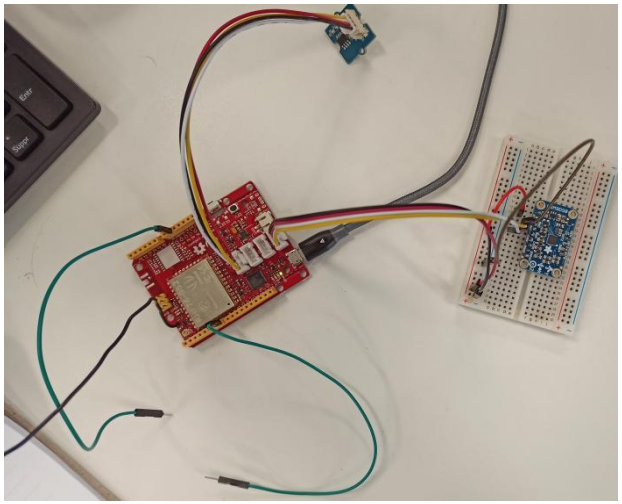


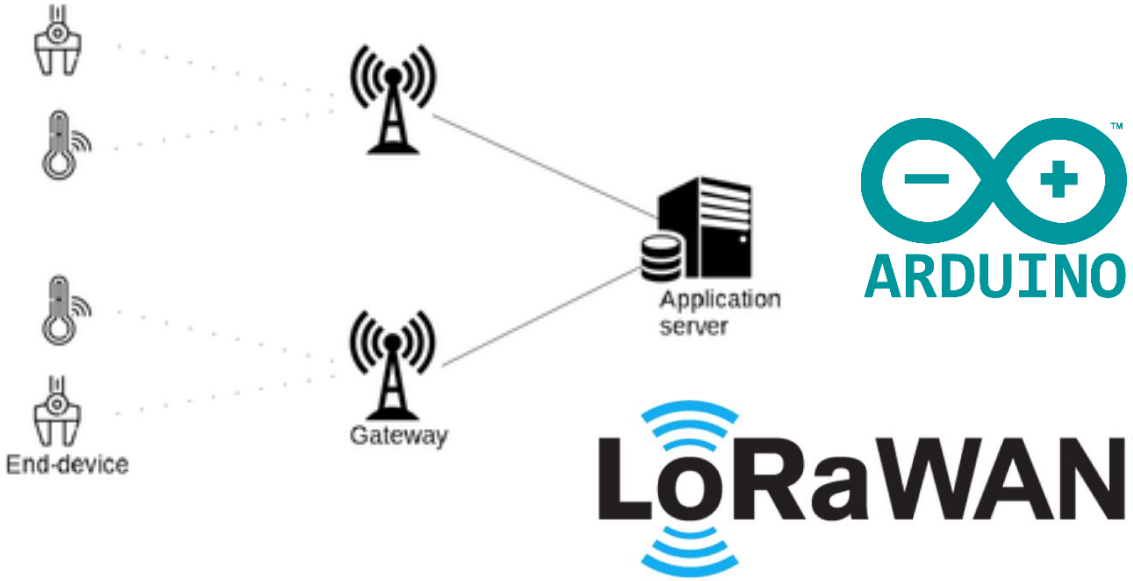
Description :

VR project developed with Robin Malmasson and Eurydice Ruggieri for the "Virtual Reality" course of Cédric Fleury. This whole project was centered around the theme of "Data Visualization". The purpose of this project was to use Virtual reality to simulate a crash room and to find innovative ways to visualize data in a 3D space.

Seeduino – Internet of Things

Fev. 2020 – Mar. 2020



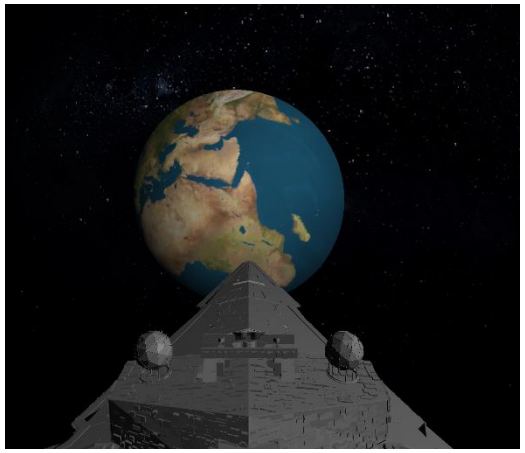
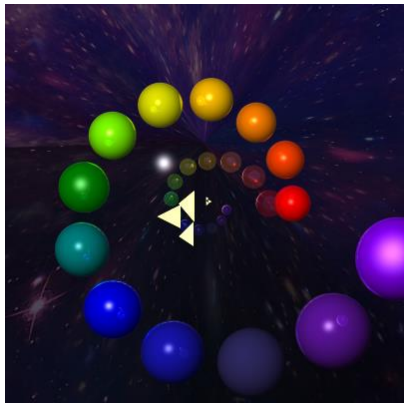
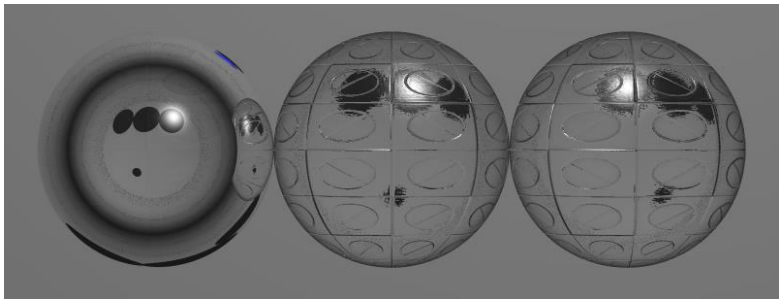
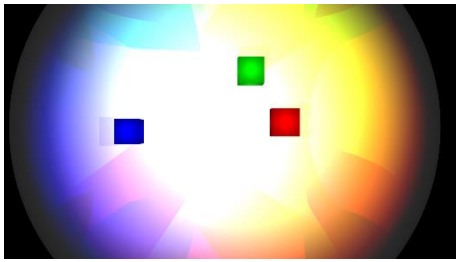
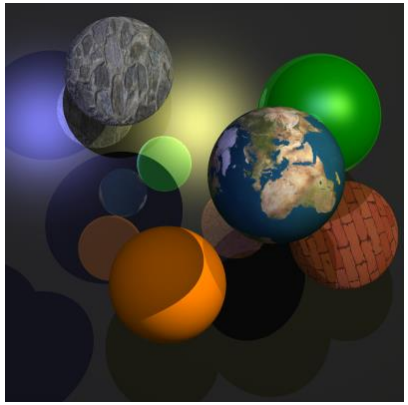
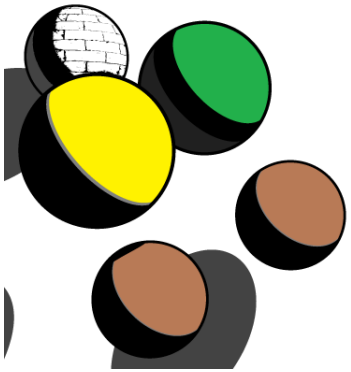


Description :

Project with Robin Malmasson for the "Internet of Things" course of Laurent Nel. The objective of this was to create an end to end line from the Arduino's captors to its processing by a server. We tried to minimize the traffic and used Lorawan and Google's Protocol Buffer to transfer minimal-sized data from the Arduino to the server.

C++ Raytracing Framework

Oct. 2019 – Jan. 2020

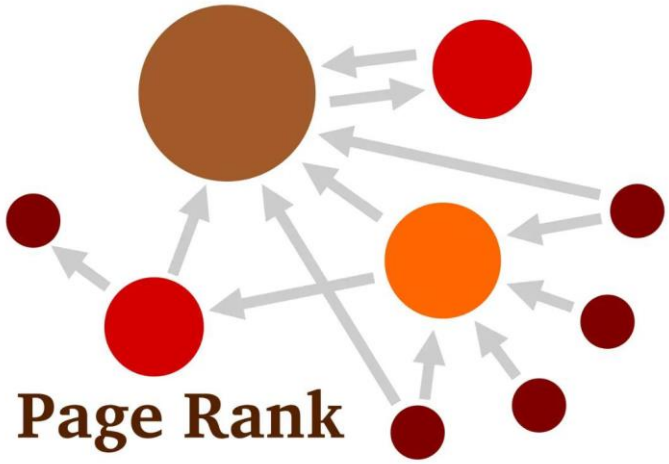







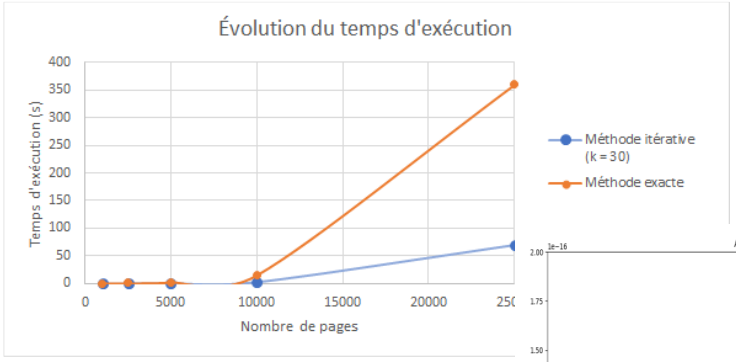

Description :

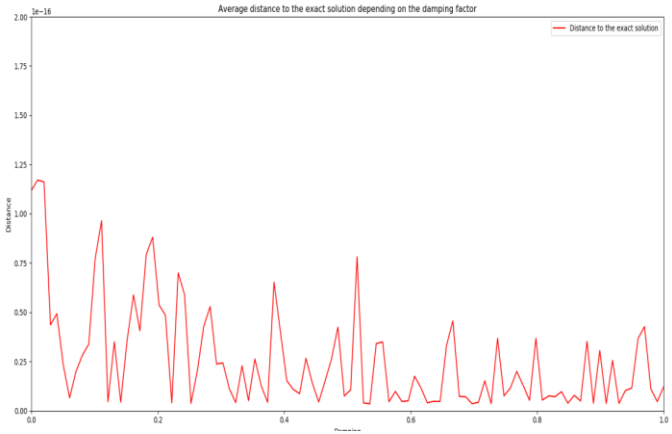
Raytracing project developed with My-Linh Ho for the "Advanced Graphics" course of Tobias Isenberg at Polytech Paris-Sud. The purpose of this project was to discover the raytracing process in graphics and its differences with the classic "shading" graphics programming.

Python PageRank

Oct. 2019 – Dec. 2020







Description :

Data Science project built with Robin Malmasson. In this project, we implemented the PageRank algorithm in Python in order to analyze it. The interest of this analyze was to understand that every ranking algorithm has biases and it is important for every user to acknowledge them.

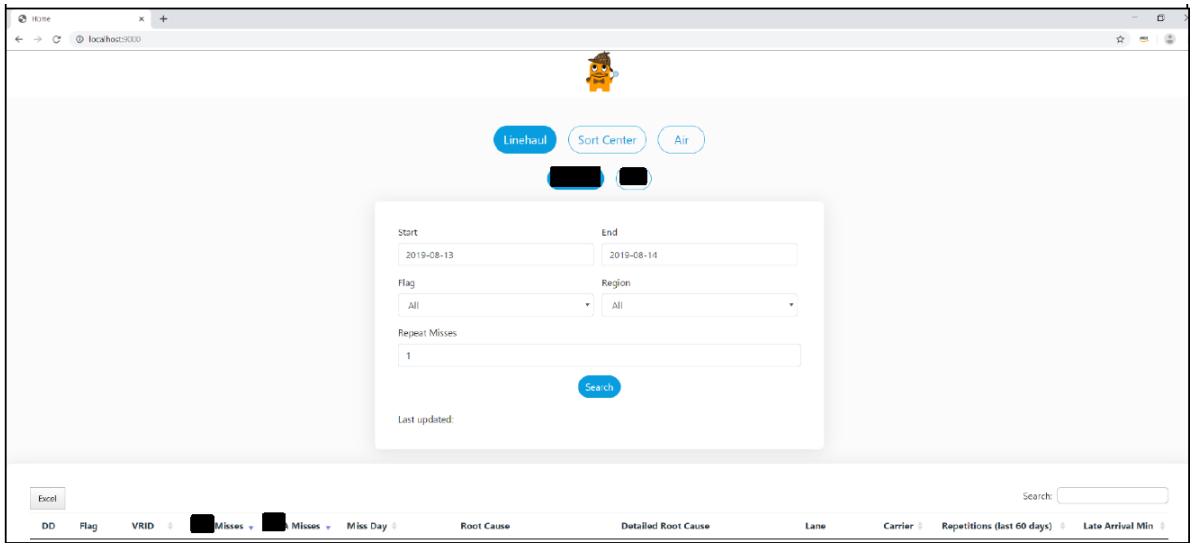
Paris-Saclay's Ultimate Championship Website *Oct. 2019*

Description :

Small website I created for the Paris-Saclay's Ultimate Championship event I organized. This event is a video game competition I organized (on the videogame Super Smash Bros. Ultimate) between 8 major universities in France located on the "Plateau de Saclay".

Amazon Miss Monitoring Tool

May 2019 – Sep. 2019

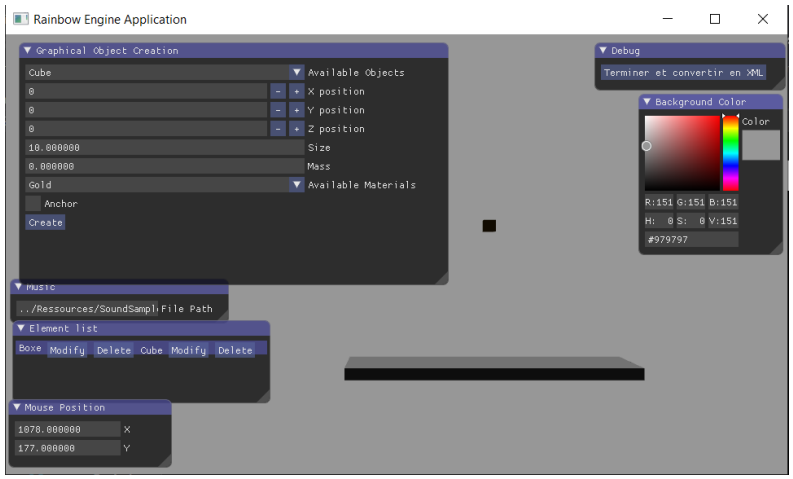


Description :

Project built while during my 4-month internship at Amazon EU. This software is a monitoring platform to report transportation misses in Amazon's Logistic. This was my first full-stack experience as I was fully in charge of the project. This project also gave me a lot of experience with AWS (as I built it in AWS).

Rainbow Engine

Jan. 2019 – May 2019

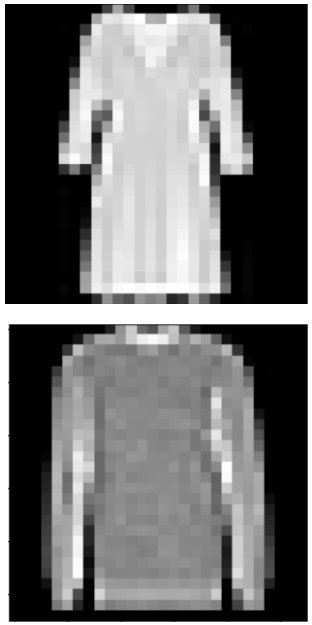


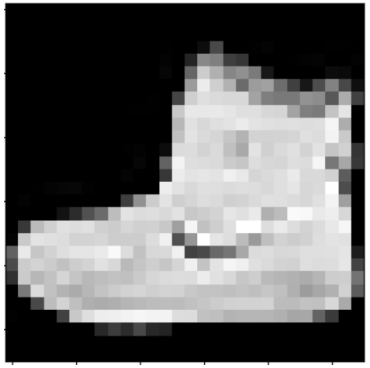
Description :

3D Engine built with Célestin Collin, Jordane Minet, Alexis Proust and Eurydice Ruggieri. This OpenGL-based engine supports all the basic features of a game engine : 3D Graphics/Rendering, Sound Management (OpenAL), Physic, Level Editor, etc. The main goal here was to test our skills (technical and management) with a complex software to develop. The main guideline was to abstract things as much as possible for the user in order to make the engine easy to use for beginners.

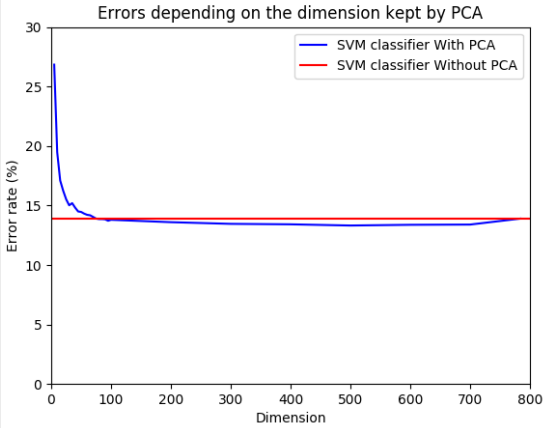
Python Image Recognizer

Jan. 2019 – Feb. 2019





```
def DistMin(PCAtraining, PCAdev) :

    #defining our start time
    start_time = time.time()

    # Defining our classes
    class0 = PCAtraining[trainingLabel == 0]
    class1 = PCAtraining[trainingLabel == 1]
    class2 = PCAtraining[trainingLabel == 2]
    class3 = PCAtraining[trainingLabel == 3]
    class4 = PCAtraining[trainingLabel == 4]
    class5 = PCAtraining[trainingLabel == 5]
    class6 = PCAtraining[trainingLabel == 6]
    class7 = PCAtraining[trainingLabel == 7]
    class8 = PCAtraining[trainingLabel == 8]
    class9 = PCAtraining[trainingLabel == 9]

    # Centroids of classes
    avg0 = np.mean(class0, axis=0)
    avg1 = np.mean(class1, axis=0)
    avg2 = np.mean(class2, axis=0)
    avg3 = np.mean(class3, axis=0)
    avg4 = np.mean(class4, axis=0)
    avg5 = np.mean(class5, axis=0)
    avg6 = np.mean(class6, axis=0)
    avg7 = np.mean(class7, axis=0)
    avg8 = np.mean(class8, axis=0)
    avg9 = np.mean(class9, axis=0)

    avg = [avg0,avg1,avg2,avg3,avg4,avg5,avg6,avg7,avg8,avg9]

    #Compute the learning time
    learn_time = time.time()-start_time
    print('\tLearning time : ' + str(learn_time) + ' sec')


    start_time = time.time()

    #We try to guess the classes of our dev images
    classifierDevLabel = np.zeros(devLabel.shape)

    #For Each image...
    for i in range(0,devLabel.shape[0],1):

        squareDist = np.zeros(10)
```



Description :

Project developed with Eurydice Ruggieri for the "Machine Learning" course of Claude Barras at Polytech Paris-Sud. This project is a program that learns how to recognize from low resolution images different types of clothes. The aim of this project was to implement different classifiers and compare their performance.

Console++ Age of War

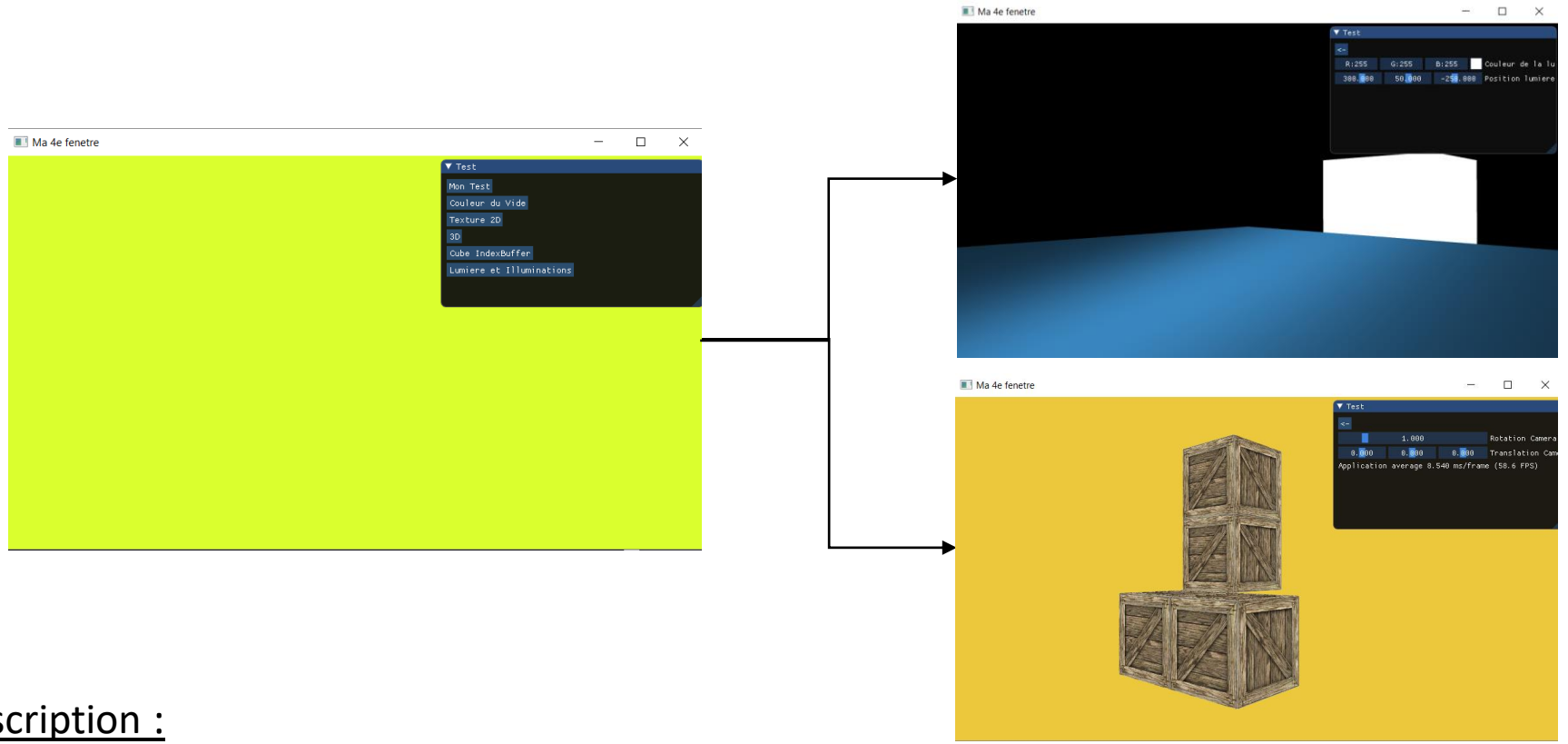
Dec. 2018 – Jan. 2019

Description :

Project developed with Eurydice Ruggieri for the "Object-Oriented C++" course of Emmanuelle Frenoux at Polytech Paris-Sud. The aim of this project was to create an enhanced version of the Age of War game for the console using C++.

OpenGL Testing Framework

Sep. 2018 – Oct. 2018

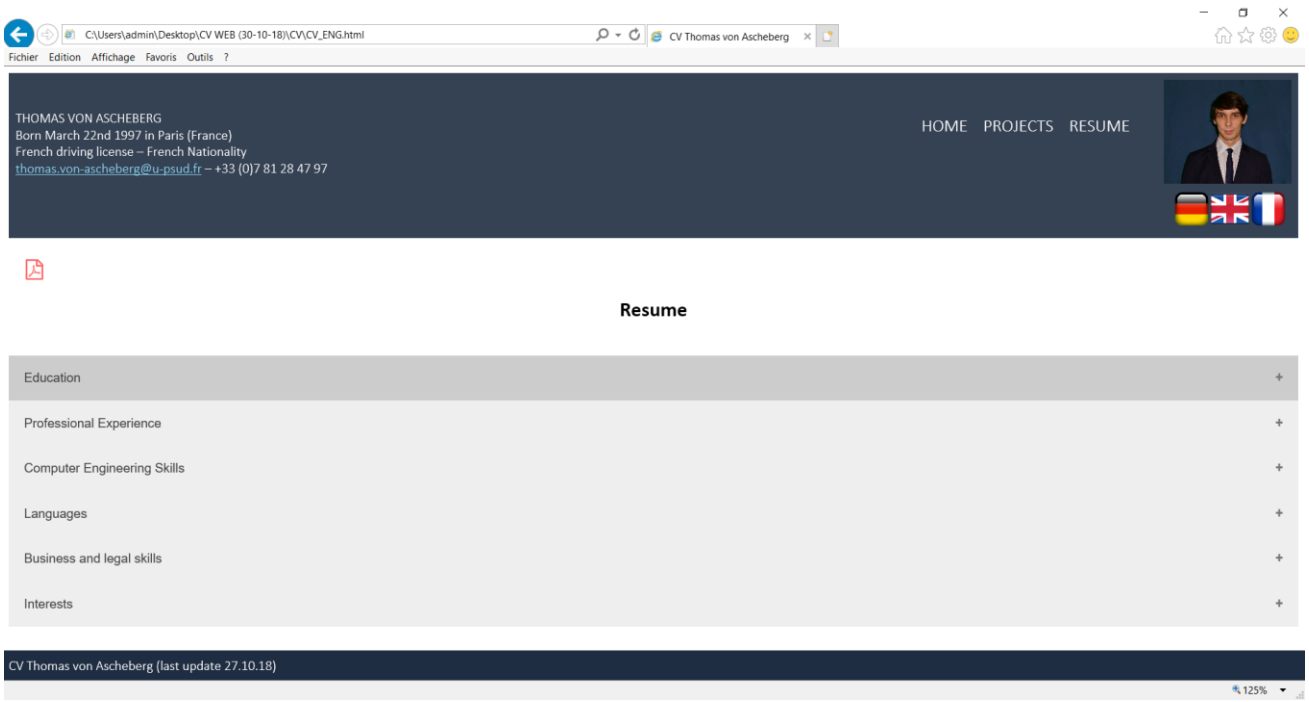


Description :

Personal project developed in C++ during fall 2018. This is an application that allows the user to create small OpenGL applications very easily. This project is a sandbox to test OpenGL code before implementing it in my 3D engine project (Rainbow Engine).

Web Resume

Jul. 2018 – Aug. 2018

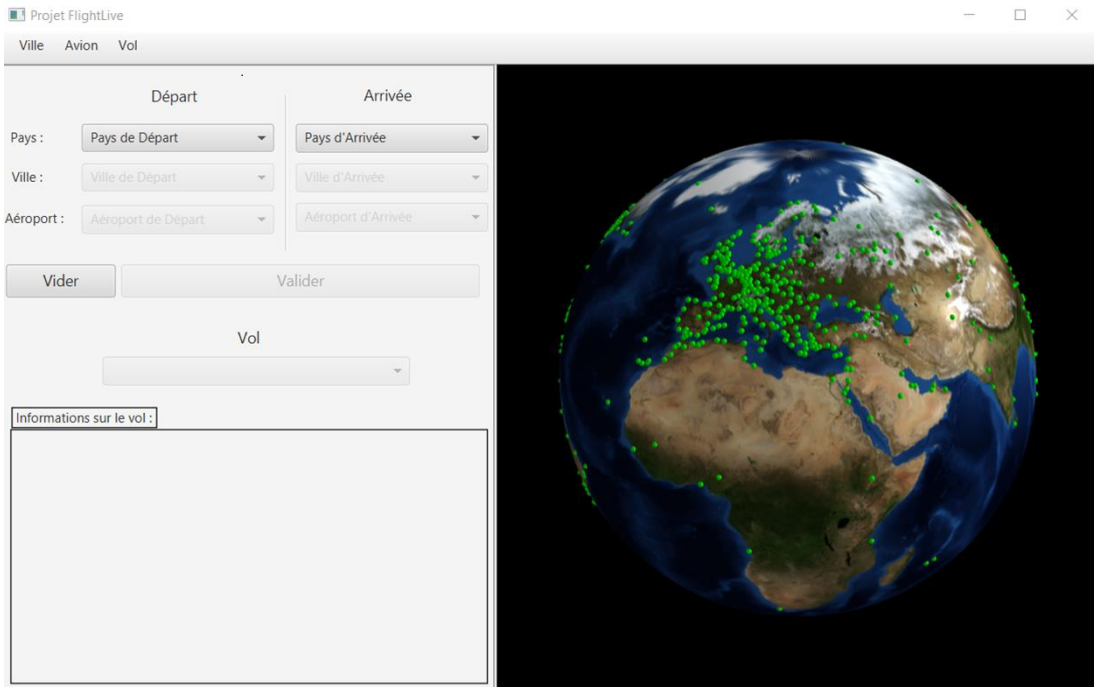


Description :

Personal project developed during summer 2018. This is an interactive Resume/Portfolio. My goal for this project was to deepen my web programming knowledges.

FlightLive

May 2018 – Jun. 2018

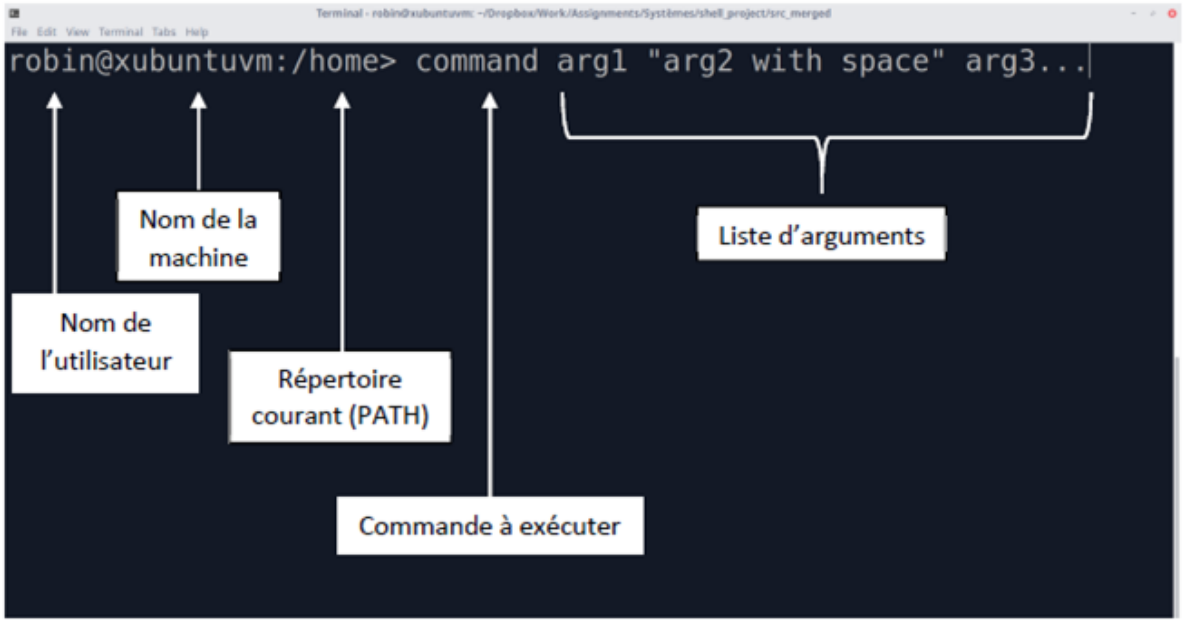


Description :

Project developed in Java/JavaFX with Alexis Proust as part of the "Human-Computer Interaction" course of Cédric Fleury at Polytech Paris-Sud. This application allows to consult in pseudo-real time the list of current flights in the world according to what the user wants.

Unix Shell

May 2018 – Jun. 2018



Description :

Project developed with Robin Malmasson as part of the "Operating Systems" course of Thomas Lavergne at Polytech Paris-Sud. The development was done in C in an Unix environment. The aim of this project was to create a fully functionnal Unix Shell with all its specificities (redirections, pipes, etc.)

Matrix ReAnimation

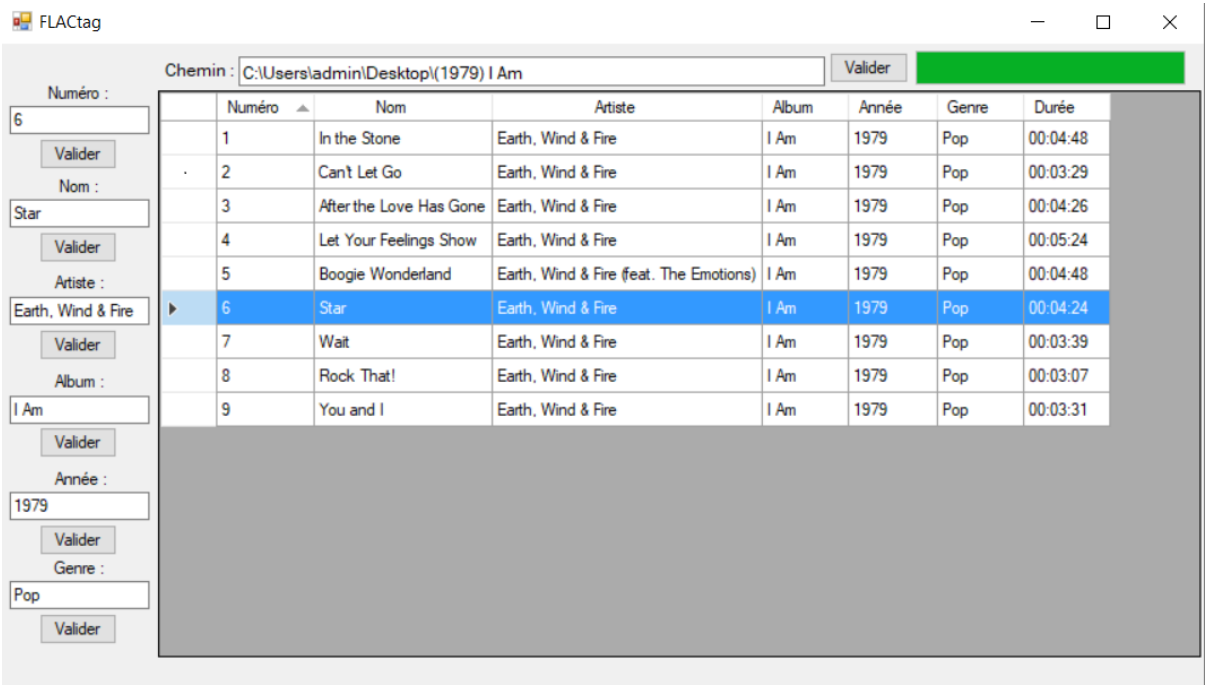
Dec. 2017 – Jan. 2018

Description :

Project developed with Robin Malmasson and Eurydice Ruggieri as part of the course "Introduction to Computer Graphics" of Tobias Isenberg at Polytech Paris-Sud. The development was done in C ++ under Visual Studio 15. In this project we tried to reproduce, as closely as possible, the famous Matrix bullet dodge scene in OpenGL. It was awarded in a competition organized by INRIA.

FlacTag

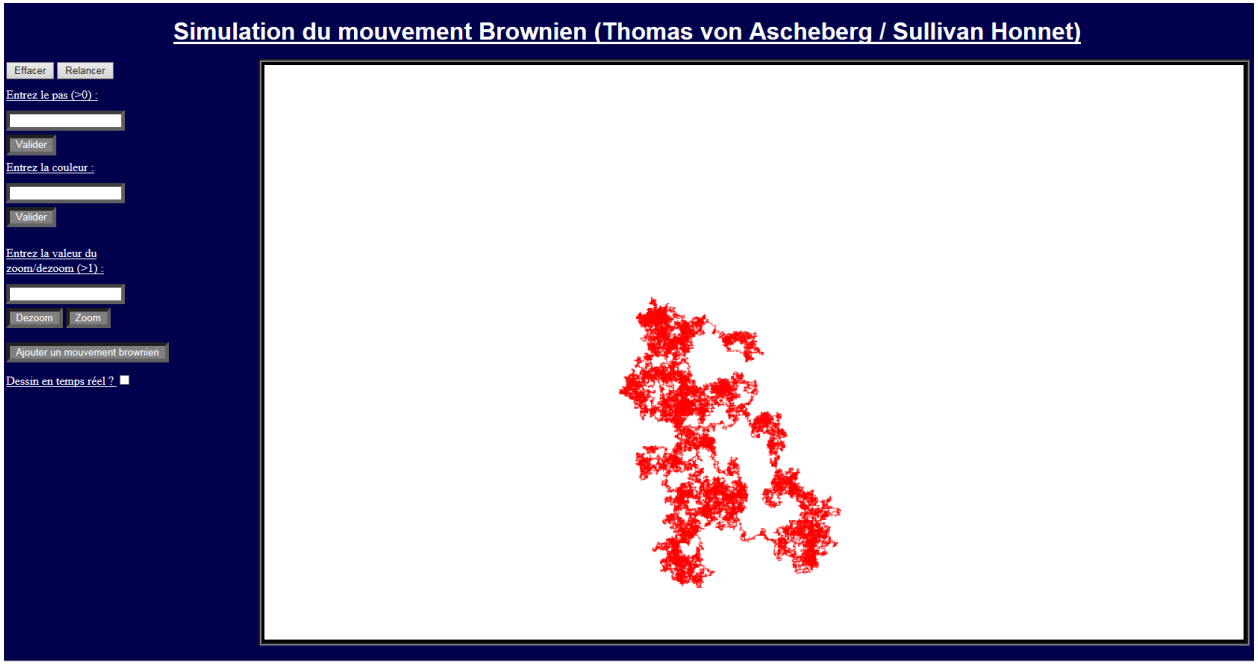
Jun. 2017 – Aug. 2017



Description :

Personal project developed during the summer of 2017. This project is a small utility for processing FLAC files. The main goal of this project was to discover the .NET framework and the Visual Basic programming language. It is inspired by the MP3Tag free software.

Brownian Motion Simulation *Oct. 2016 – Nov. 2016*

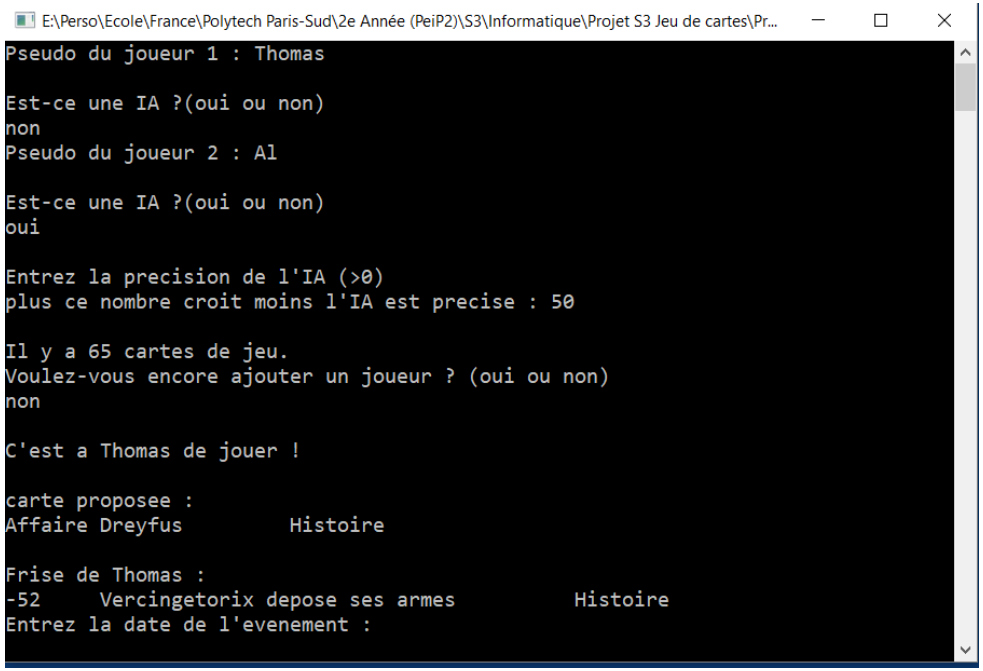


Description :

Project developed with Sullivan Honnet as part of the "Discovery of Web programming" course of Claude Barras at Polytech Paris-Sud. The development was done in HTML5/CSS3/Javascript. The aim of this project was to introduce ourselves to Web programming and its various components.

Console Card Game

Sep. 2016 – Oct. 2016

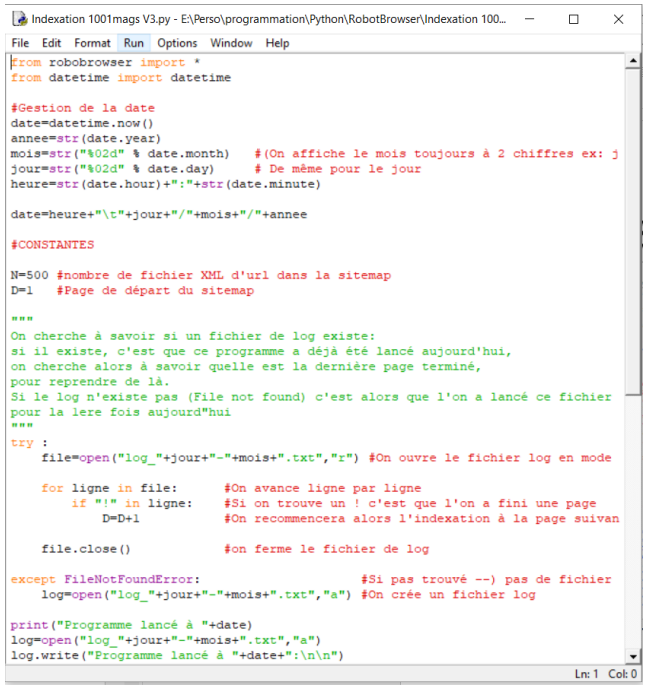


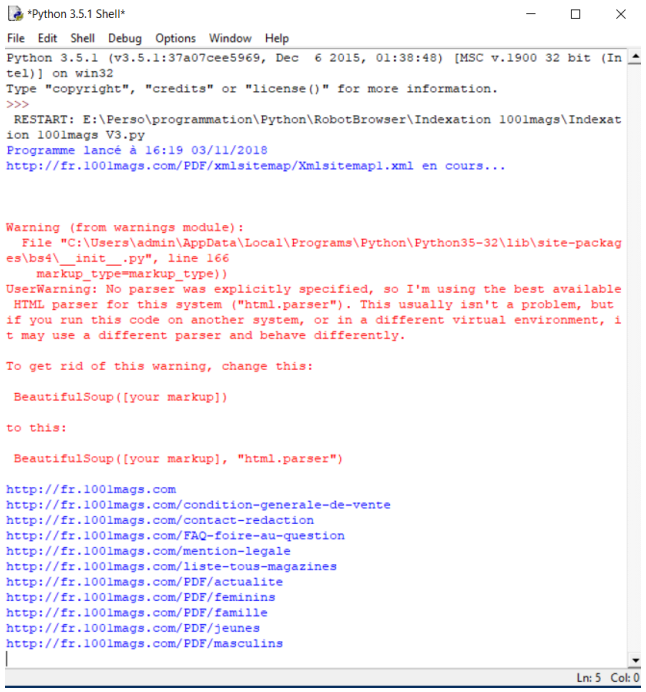
Description :

Project developed with Sullivan Honnet as part of the "C++ programming" course of Aurélien Max at Polytech Paris-Sud. This project is developed in C++. It is a small card game for the console. The purpose of this project was to improve our C/C++ programming experience.

Python Web Scrapping

Jun. 2016 – Jul. 2016



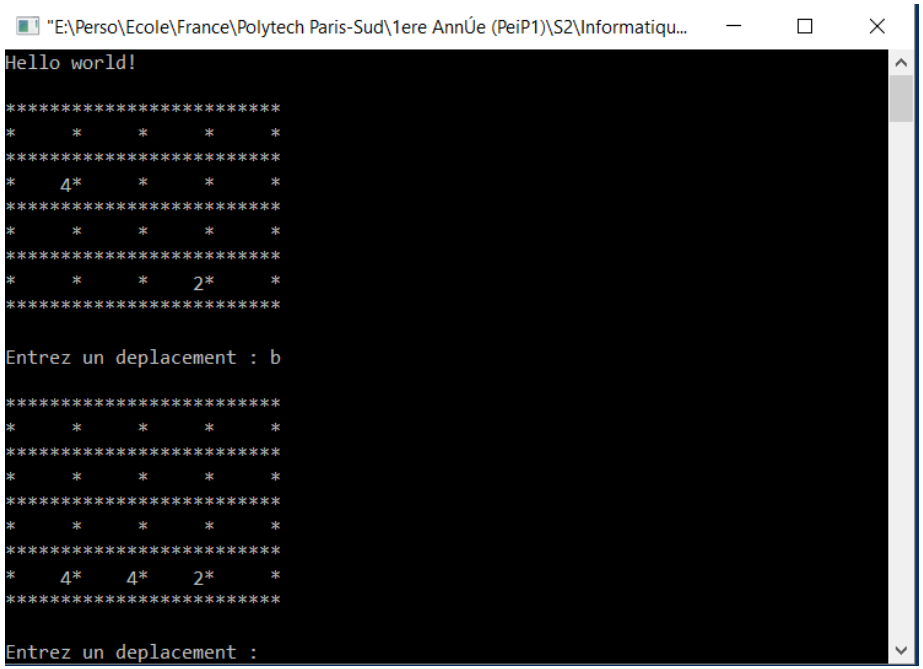


Description :

Project developed during my internship at 1001mags.com. Those scripts were meant to scrap the web for automatic free newspaper download and to check if any webpage of the website is down.

Console 2048 Game

May 2016 – Jun. 2016

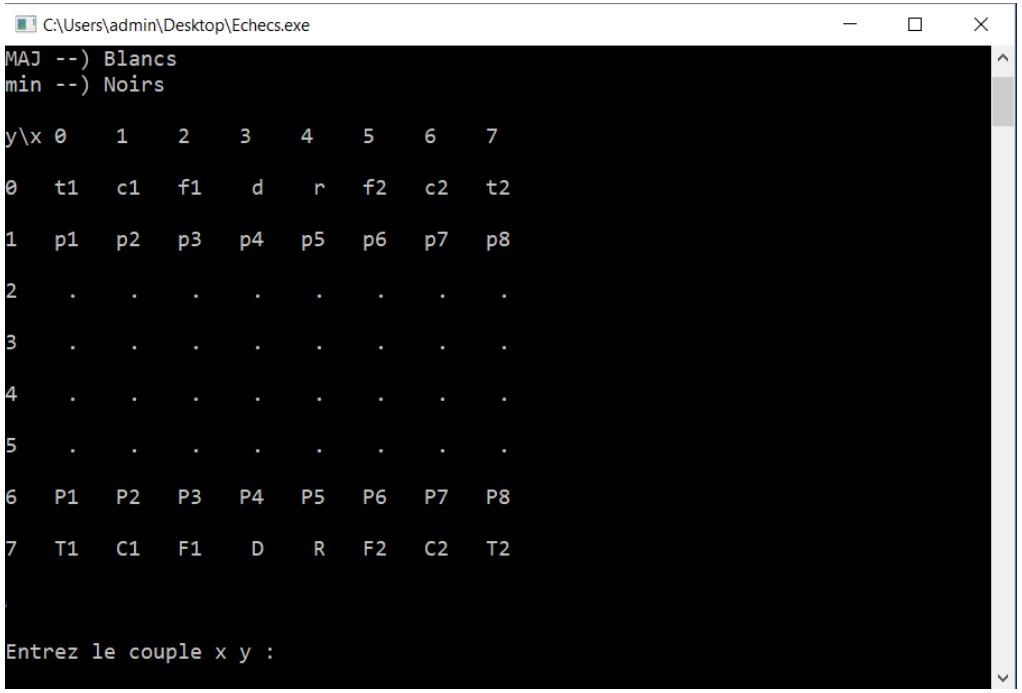


Description :

Project developed with Sullivan Honnet as part of the "C beginner's programming" course of Frederic Voisin at Polytech Paris-Sud. This project is developed in C. It is a reproduction of the 2048 mobile game but for the console. The main goal of this project was to improve our C programming experience.

Console Chess

Oct. 2015 – Nov. 2015

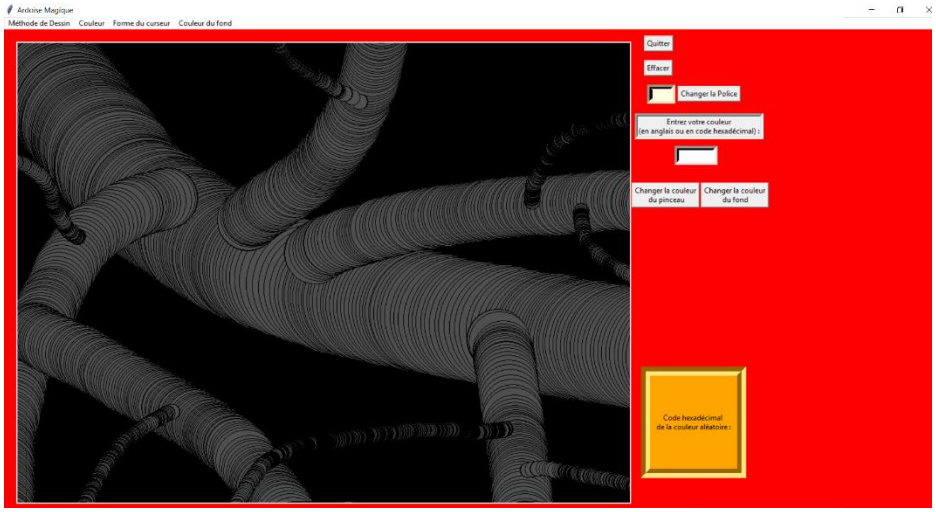


Description :

Personal project developed in C++. This project is a small chess game for the console. My aim for this project was to start learning the C++ programming language.

Python Drawing Board

Jun. 2015 – Aug. 2015

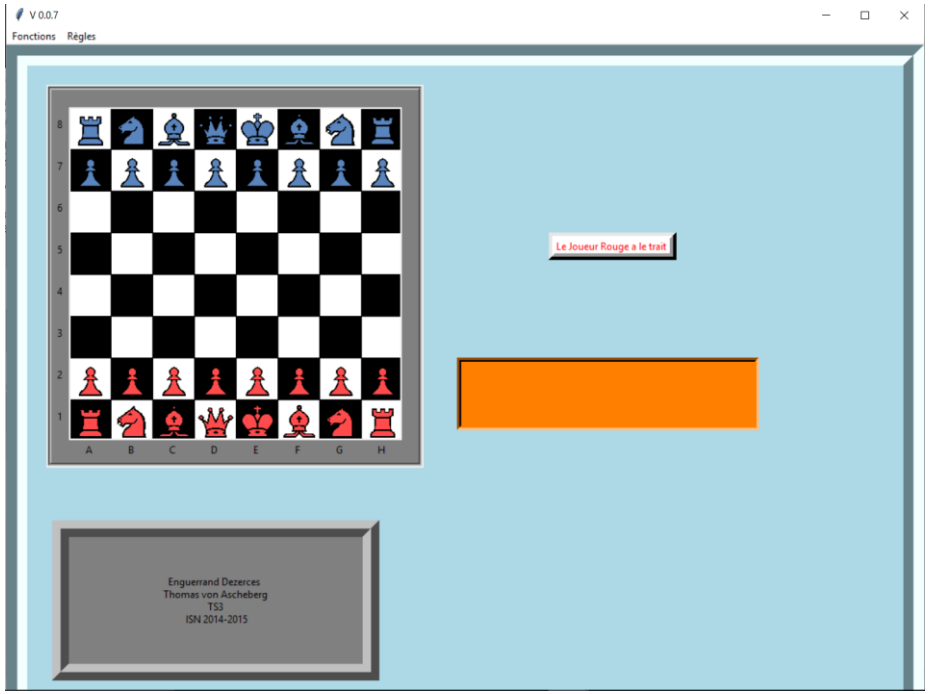


Description :

Personal project developed during the summer of 2015. This project is a small drawing software. The main goal of this project was to test my python skills at the moment and to improve my programming knowledges.

Python Chess

Dec. 2014 – Jun. 2015



Description :

Project developed in High School with Enguerrand Dezerces as part of the "Computer and Digital Sciences" (ISN in French) Baccalaureate exam. This project was my first programming experience. The goal of this project was to program a classic chess game (with all the official rules).