

FIU OSINT-Bot Application

Students: Andres E. Ogando

Mentor: *Dr. Masoud Sadjadi*, Florida International University

Instructor/Faculty: *Dr. Masoud Sadjadi*, Florida International University



PROBLEM

- The challenge involves creating a program that uses facial recognition and web scraping technologies for research, while upholding ethics, privacy, security, and transparency, balancing innovation with responsible technology use and ensuring legal and ethical integrity. Including creating a comprehensive GUI to house the programs into one machine.

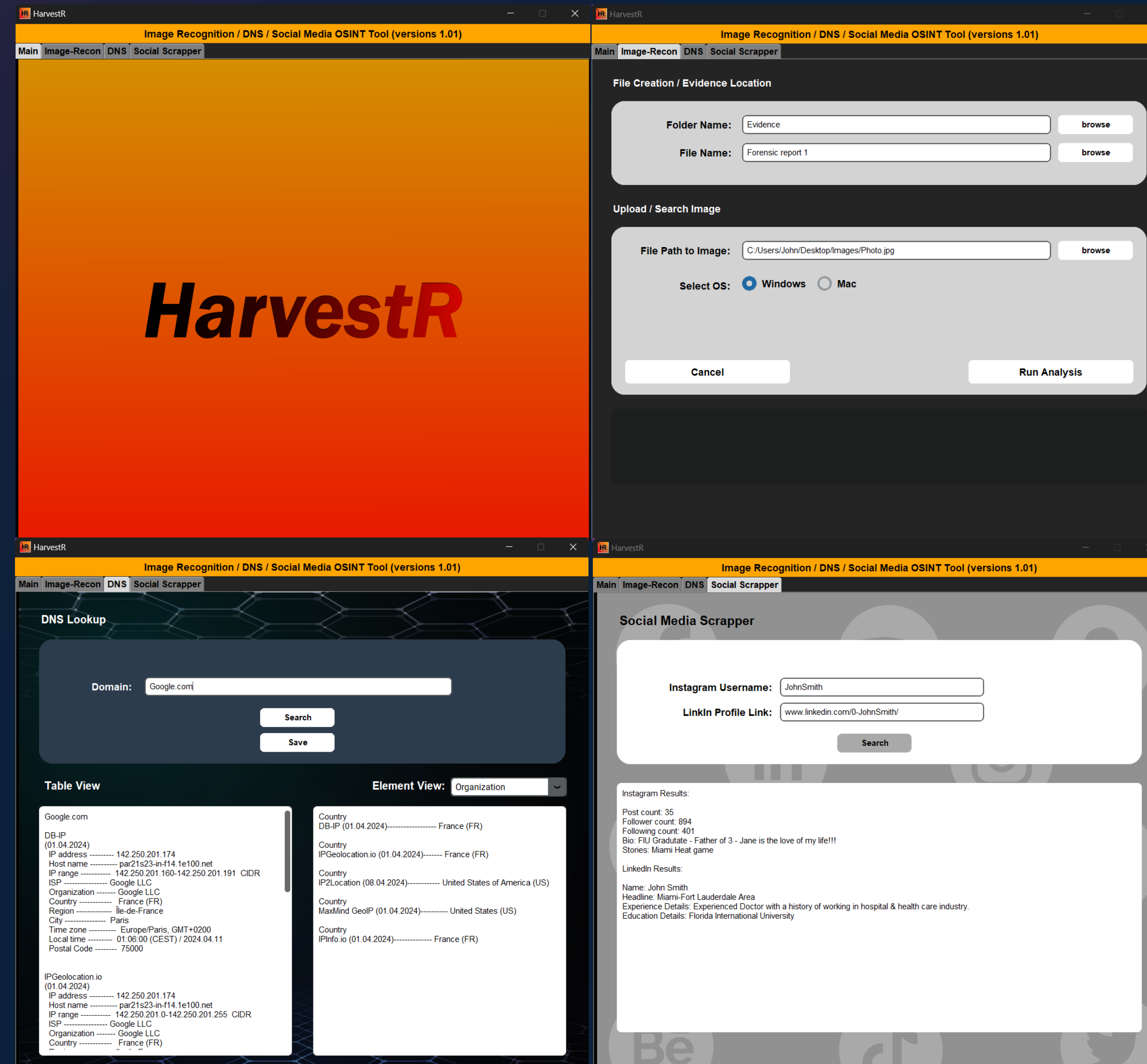
CURRENT SYSTEM

- HarvestR 1.01 currently operates on the Windows and Linux operating systems when properly installing all external libraries. Future projects and Integration will include Mac operating systems for image recognition operations. The DNS Lookup and Social Scraper however, can utilize both operating systems. Lastly, all tools can execute through the terminal command prompt by using our standalone python files.

REQUIREMENTS

- Running HarvestR requires installing multiple third-party packages along with the user's preferred IDE or Python IDLE version 3.11 or higher. Packages include:
 - selenium
 - customtkinter
 - pyautogui
 - Firefox
 - tkinter
 - beautifulSoup
 - pywinstyles
 - Chrome

APPLICATION DESIGN



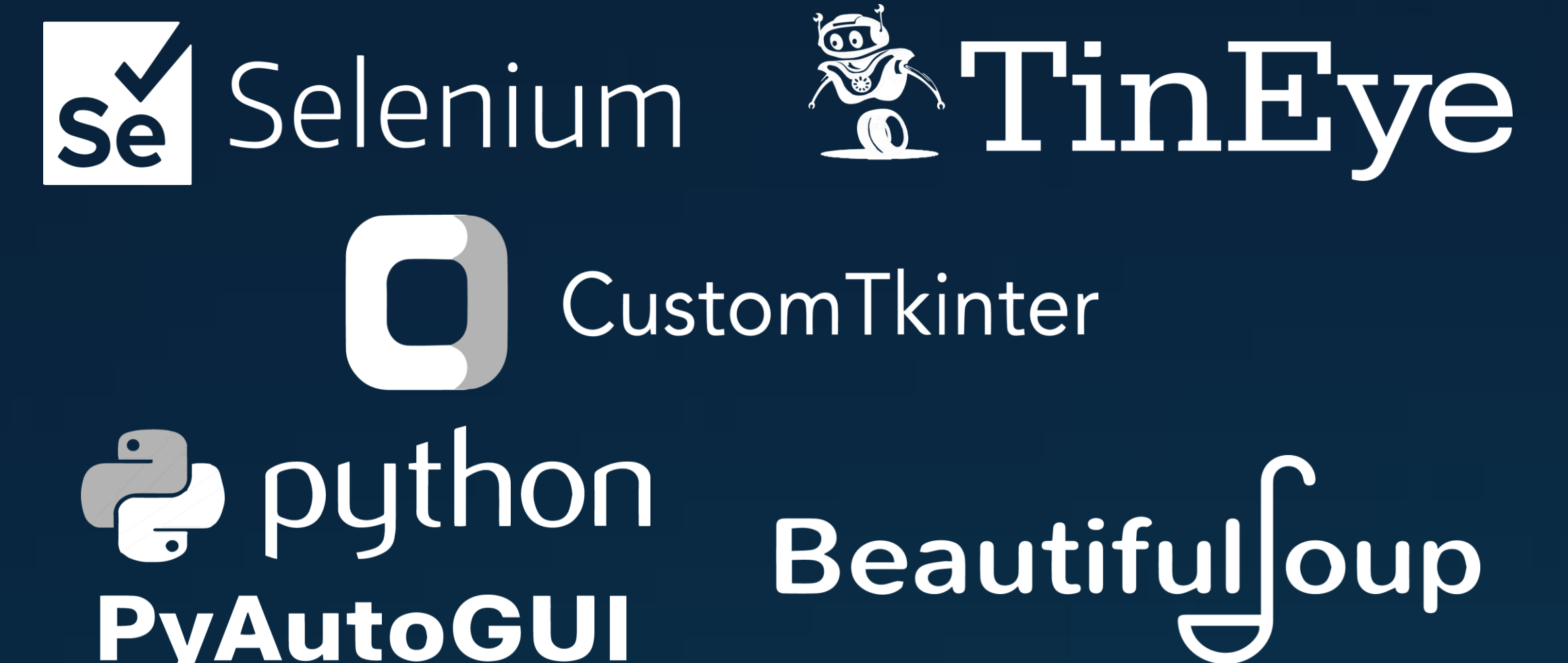
SYSTEM DESIGN

- HarvestR includes three customized automated tools but has the capabilities to expand for future additions. The tools currently coded included:
 - Image Recognition
 - Social Media Scraper
 - DNS Lookup

INDIVIDUAL CONTRIBUTION

- Developed an image recognition automation bot using TinEye to reverse image search local files uploaded by the user which saves the results into a custom directory for further investigation.
- Created the HarvestR application GUI with CustomTkinter and tkinter, that operates completely within the python file environment. All libraries are imported within the executable to support the methods from 3 tools developed by the team: Image-Recon, DNS, and Social Scraper.

IMPLEMENTATION



SUMMARY

- Utilizing a combination of useful open-source tools and third-party python packages provide programmers with a vast array of customization with automated files. Integrating the resources mentioned can harness functionalities beyond the core Python language, enabling enhanced OSINT repetitive task and enhancing productivity across multiple platforms.

ATTENTION: Participants involved in any project are fully informed about the nature, purpose, and methodologies involved, and their consent is obtained prior to participation. This project provides an aggregate analysis derived from publicly available data sources. It is crucial to acknowledge that the information presented here is intended exclusively for academic and informational purposes. We firmly oppose and abstain from personally employing facial recognition technologies or web scraping methods that compromise individual privacy.

ACKNOWLEDGEMENT

The material presented in this poster is based upon the work supported by *Dr. Masoud Sadjadi*. We/I thank *Dr. Masoud Sadjadi* for his assistance and mentorship that I/we received throughout the senior design project.