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Visit my portfolio website to view my work! – My Portfolio / harshawardhan3.github.io

#### **EDUCATION**

**The University of Western Australia**Bachelor of Science in Computer Science and Cybersecurity

### **PROJECTS**

## **ELECTION SCENARIO SIMULATION -**

An intelligent turn-based game in **python** used to simulate political interference by two rival powerful countries (Blue and Red) in the election process of a third country (Green). **Decision Trees and Probabilistic graphs** used to simulate the effect of campaigning on electoral college (voters). Visual demonstration through python libraries. Players can choose to play as either blue or red team. The intelligent automated agent will play as the other.

# COMMAND LINE TOOL TO SEARCH FOR DUPLICATES IN A DIRECTORY SYSTEM (IN

**C)** – UNIX System API-calls to retrieve file data. File comparison using **SHA-256 Hashes** and using **hash-table struct** to clump duplicate entries together.

# SERVER AND CLIENT SYSTEM TO SHARE FILES BETWEEN COMPUTERS ON A

**NETWORK** – Implementation in both C and Python with the support for queued tasks and response time-outs for the server. Using – Sockets.

**TRAVELISOR WEBAPP (FULL-STACK) -** A chatbot based website for travel planning. Front-end using - HTML . CSS . JS . AGILE Backend using - FLASK . SQL . PYTHON . OPENAI API

# Harshawardhan Mane

#### SKILLS

Programming - C . Python . JAVA . JAVASCRIPT, TYPESCRIPT

Web and Database - HTML. CSS. SQL. FLASK. AGILE METHODOLOGY

Frameworks - BOOTSTRAP . OPENCV . REACT JS . TENSORFLOW

Tech - GIT . DOCKER . LINUX . VSCODE . MATLAB, Azure, AWS

Language(s) - ENGLISH . HINDI . MARATHI . ITALIAN

CYBERSECURITY and SCRIPTING – CRYPTOGRAPHY and CRYPTANALYSIS. FAMILIAR with using popular tools like METASPLOIT, WIRESHARK, AIRCRACK-ng, NMAP, JtR, Kali, Python scripts for exploits, SQL INJECTION. Familiar with CTF events.

### **PROJECTS**

**CAMERA CALIBRATION AND POSE –** A python-based app to calibrate a set of cameras and determine their position in the setting using a set of images. Implementation – GUI in TKINTER. OBJECT DETECTION using Connected Component Analysis. CAMERA CALIBRATION and POSE Estimation by triangulation and PnP Solving (OPENCV)

**STILL NO LONGER –** Hackathon organized by UWA Venture and Coders for Causes, Sponsored by Microsoft and Wesfarmers Chemicals, Energy and Fertilizers. Placed as Runners-Up -

Al Program used to transform lithium mining site photos into captivating time-lapse videos between a given set of dates. Implementation – GUI in TKINTER, Trained Al models that use Fourier Transform for Blur and Glare detection. Histogram Analysis for image filtering and refinement.

# REFERENCE -

MR. DEEPAK DEORE, SR. SOLUTIONS ARCHITECT, HCL TECHNOLOGIES.

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