Erfan Habibi Ehsani

Tehran, Iran | erfan.habibi.ehsani@gmail.com | linkedin.com/in/erfanhabibi | github.com/Erfanhabibi

Education

B.Sc. in Mathematics and Computer Science, Amirkabir University of Technology, Tehran, Iran 2020 – Present

Expected Graduation: 2025
Relevant Coursework: Data Structures, Algorithms, Machine Learning, Advanced Programming

Experience

Personal and Academic Coding Projects 2021 – Present

Highlights:

- Developed a Python application utilizing OpenCV for real-time image processing, enabling features such as object detection and image filtering.
- Implemented a data mining project using Python, extracting valuable insights from large datasets with libraries like pandas and NumPy to inform decision-making.
- Created interactive web applications using Java and JavaScript, enhancing user experience through dynamic content and responsive design.

Projects

Server-Client Communication System github.com/Erfanhabibi/python-socket

Highlights:

- Implemented a server-client communication system using Python's sockets for transferring images and audio data.
- **Server:** Utilizes Tkinter for the GUI and OpenCV for capturing images from the webcam, along with PyAudio for recording audio.
- **Prerequisites:** Python 3.x, OpenCV , PyAudio, Pillow .
- **Usage:** Run the `server.py` script, click "Start Server" to initialize, and capture images and record audio. Received files are saved in the `captured_images_server` and `captured_audio_server` folders.
- **Client:** Responsible for sending images and audio data to the server. Implemented separately based on the server's IP address and port numbers.
- **Notes:** Ensure proper network configurations for communication; adjust the IP address and port numbers in the code as needed.

Skills

Programming Languages: Python, C++, Java, C

Web Development: HTML, CSS, JavaScript, React, Django

Machine Learning: Python libraries such as NumPy, pandas, scikit-learn, TensorFlow, Keras

Image Processing: Python libraries such as OpenCV, Pillow, scikit-image

Data Mining: Knowledge of data analysis and mining techniques (e.g., `pandas`, `NumPy`, `BeautifulSoup`)

Networking: Understanding of networking protocols, TCP/IP, and experience with socket programming

Linux: Basic knowledge of Linux concepts and commands

Other: Git, Algorithms, Data Structures, Problem Solving