

UTKARSH SALUNKE

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EDUCATION

Bachelor of Engineering in Computer Engineering

Dr. D. Y. Patil College of Engineering, Pune

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CGPA: 8.61/10

Projects

Guessing a Word Game Using Unix Socket Programming ([Github Link](#))

- Developed a multiplayer **word-guessing** game using Python with **socket programming** and **multi-threading**.
- Enabled players to connect from different terminals and compete in **real-time**.
- Implemented game mechanics where the game continues until both players guess the same word, fostering interaction and quick thinking.
- Socket programming and multi-threading are utilized for **concurrent communication** between players and the server in gaming applications.

Technologies used: Python, Socket Programming, Multi-threading

Leveraged knowledge: Use socket programming to establish **client-server** communication, handling connections using multi-threading for concurrent processing

Video-to-ASCII Converter ([Github Link](#))

- Developed a **C++ application** that converts real-time video streams into **ASCII art**.
- Utilized **OpenCV** for video capture and **image processing**.
- Displayed ASCII output in Vim on an Ubuntu environment.

Technologies used: C++, OpenCV, Vim, Ubuntu

Leveraged knowledge: Use **OpenCV** to convert videos and images into **ASCII** by mapping **pixel intensity** to ASCII characters in grayscale, optimizing output with efficient pixel processing. Leverage **Vim** for streamlined **C++ development**, utilizing custom keybindings, macros, and external tool integration for enhanced **terminal-based coding**.

URL Verifier ([Github Link](#))

- Developed a URL verification tool in **Express.js** that determines the safety or maliciousness of URLs by integrating the **Google Safe Browsing API** for real-time threat analysis and detection.
- Used **Axios** for HTTP requests, **Validator** for input validation, **Whois** for domain lookup, and **TLDts** for domain parsing.

Technologies used: Express.js, Google's Safe Browsing Api

Leveraged knowledge: Applied expertise in **web security**, **API integration**, and tools like **Express.js**, **Axios**, **Validator**, **Whois**, and **TLDts** to build a reliable URL verification system.

Password Generator and Handler ([Github Link](#))

- Developed a password generator tool in **C++** to create strong, secure passwords with customizable parameters.
- Implemented a password handler to securely store and manage generated passwords.
- Incorporated **password encryption** using the **DES encryption algorithm** to enhance security.

Technologies used: C++, Encryption(DES Algorithm), MySQL

Leveraged knowledge: Implement **data security** using the **DES encryption algorithm** for encrypting and decrypting sensitive information. Perform efficient database operations in **MySQL**, utilizing **SQL queries** for CRUD functionality, indexing, and transaction management.

Languages and Technologies

- **Programming Languages:** C++, C, Python, HTML, Javascript, CSS
- **Databases:** MySQL, Postgres
- **Frameworks And Tools:** Vim, Bash, Git, OpenCV, Beautiful Soup, Web-Scraping, Encryption, Standard Template Library(STL), Multi-Threading, Socket Programming, TCP/IP
- **Others:** Github, Linux, Data Structures

Links

- **LinkedIn Profile:** [Utkarsh Salunke - LinkedIn](#)
- **GitHub Profile:** [Catalyst20104 - GitHub](#)
- **CodeChef Profile:** [Facilitator - CodeChef](#)