

Viraj Bhartiya

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EDUCATION

K.J. Somaiya College of Engineering
B.Tech Computer Engineering

Sept 2027

Vidyadham Jr. College
Secondary Education

July 2021 - June 2023

EXPERIENCE

KJSCE CodeCell

Tech Team

- Developed a responsive website for Debating Society, Voices of Somaiya Vidyavihar University and a futuristic website for Tech Fest - [KJSCE DevOpia](#)
- Conducted a workshop on competitive programming where participants we taught basics of C++ and algorithms used in competitive programming

Inter IIT Competitive Programming Conclave

Web Dev Lead

- Designed and developed the official website for the Inter IIT Competitive Programming Conclave, India's largest competitive programming camp according to statistics involving 30+ colleges including IITs, NITs, and BITS.
- Achieved over 70,000 page views and 15,000+ unique visitors during the event.

MGPEL

Software Development Lead

- Designed and implemented the backend and frontend infrastructure for the company's website, utilizing React.js and Tailwind CSS with a Node.js backend, alongside AWS RDS for PostgreSQL and S3 for storage.
- Facilitated creator and brand onboarding, providing analytics, insights, and personalized stores.

PROJECT EXPERIENCE

Spam Email Detection

Natural Language Processing

- Developed effective solutions for detecting spam emails by leveraging machine learning techniques, including Natural Language Processing and the Multinomial Naive Bayes algorithm.
- Ensured the security and efficiency of email communication through email spam detection..

Catalyst

Home automation via Reverse Engineering

- Conducted reverse engineering of the SSDP and UDP protocols utilized by Belkin's WeMo plug, enabling the emulation of said protocols through a Raspberry Pi. Implemented this emulation to establish seamless communication between Amazon Alexa and Apple's HomeKit platforms, facilitating centralized control over room electrical switches.

Alien

Virtual Screen Sharing over LAN via WebRTC

- Alien, powered by cutting-edge technologies such as WebRTC, ElectronJS, and ReactJS, innovatively transformed web browser-equipped devices into secondary computer screens
- Offered flexible screen mirroring and multitasking capabilities, seamlessly integrated with Virtual Display Adapter, and functioned as a tablet or smartphone teleprompter through the unique Flip Screen Mode, elevating screen utility and productivity.

Lucid

Text to image generation | OPENAI's CLIP Model

- Developed text-to-image generation utilities using OpenAI's CLIP model, which involved generating images from textual descriptions or existing images
- It created videos from textual inputs and produced music videos from song lyrics as part of the project

Riverto

Music streaming and download app

- Used flutter to build a cutting-edge music streaming and download application
- Involved reverse engineering to connect with the [Saavan.com](https://saavan.com) API, which granted users access to an extensive music catalogue.

Flappy Bird AI

Self-Playing Flappy Bird via Reinforcement Learning

- Designed an autonomous Flappy Bird player through Reinforcement Learning, allowing it to learn the game on its own
- Developed and implemented the project using the P5.js framework within the Processing environment

Face Recognition Attendance System

OpenCV Image Processing

- Face recognition system which can be used at an organisation of any level for logging the attendance of their employees at a glance
- Optimised to run on a RaspberryPi

SKILLS & INTERESTS

Technical: Flutter, React Native, ReactJS, Python, AppScript, Firebase, MongoDB, NodeJS, AppScript, PostgreSQL, TypeScript, AWS,

Languages: English, Hindi, Marathi

Interests: Web Development, Android, iOS, WearOS

CERTIFICATIONS

Ethical Hacking and Cybersecurity, IIT Bombay

September 2023

- OSINT (Open Source Intelligence), Network Scanning, Enumeration Techniques, SQL Injection, Cross-Site Scripting, Web Application Security