

Proficient in working with the JavaScript ecosystem and a lifelong student who digs into the topic that attracts my interest. Working in the web development field for more than 6 years and passionate about Web 3.0 and Security.

## EDUCATION

<b>MEng - Electrical and Computer Engineering</b> , <i>University of Waterloo, Canada</i>	2023 - Aug, 2024 (Expected)
<b>Bachelor of Computer Engineering</b> , <i>Pandit Deendayal Energy University, India</i>	9.45 CGPA   2019 - 2022
<b>Diploma in Computer Engineering</b> , <i>Gujarat Technological University, India</i>	9.73 CGPA   2016 - 2019

## SKILLS

**Coding Languages:** C, C++, Golang, JavaScript, TypeScript, PHP, Python

**Libraries/Frameworks:** Electron, Express JS, Flask, Gin, jQuery, React JS, Material UI, Next.JS, Tailwind CSS, Jest etc.

**Databases:** MySQL, NoSQL, Postgres, Redis, Firebase Realtime

**Other:** AWS, Burp Suite, ChatGPT - Prompt Engineering, Chrome Extension, CI/CD, Computer Networks, cPanel, Docker, Firebase Auth/Hosting, Git, GitHub Actions, Figma, Node JS, Linux, Photoshop, Postman, SEO, Webflow, Webpack

## EXPERIENCE

**Research Assistant (React JS, TypeScript, Grafana)** **May, 2024 — Present**  
*Wireless Sensors and Devices Lab, University of Waterloo* *Hybrid | Waterloo, Canada*

- Under the guidance of [Professor George Shaker](#), working closely with some of the lab's industry partners including CloudHawk where I am engaged in attempting to solve some state-of-the-art engineering and research problems.

**Frontend Engineer (Next.JS, React JS, Tailwind CSS, TypeScript) | [Link](#)** **Apr — Jun, 2023**  
*Volunteering work | Shiksha Sopan, IIT Kanpur - Prof. H. C. Verma* *Work from home*

- Working in a team consisting of professionals from different companies to redesign their NAEST website - a platform used to take online exams for students.
- Built pages of profile module and integrated API using the react-query library. Refactored code that was written by other developers.

**Software Engineer** **Jan, 2022 — Jun, 2023**  
*Praemineo Technologies Pvt. Ltd.* *Remote | Bengaluru, Karnataka*

- **Sahayak (Chrome Extension API, SCSS, TypeScript, Webpack, Integration Testing - PyTest)** - Guide tour creation tool
  - Responsible for planning a platform that helps developers to create a journey flow that guides their users using text and visual media in their local language.
  - Built SDK for the web and a Chrome Extension using vanilla TS for developers so that they can create journeys for their users and integrate in their websites effortlessly. Wrote integration testcases using PyTest library of Python.
- **Bugclipper (Golang, Gin, Postgres, Redis, Testing)** - Bug tracking tool
  - Handled the backend of a platform that helps developers to debug production errors of mobile applications. Responsible for scaling the system and implementing message broadcasting using Go channels and Kafka.
  - Created APIs for mobile SDK and used Burp Suite to carry out the testing through mobile application. Wrote testcases that covered 75% of the application to make CI/CD pipeline smoother for deployment.
- **GSTMaster (React JS and Redux-Saga)** - GST Invoices and tax filing process
  - Used react-boilerplate library as the project's foundation block and redux-saga to extend features of their platforms which was used by Chartered Accountants.
- **Glare (Vanilla JavaScript, React, Redux)** - Converts PDF to XML using AI/ML
  - Built a table control (row/column - resize/merge) similar to a spreadsheet using vanilla JavaScript that increased user's efficiency by 80% and developed a plugin to add MathJax in the TinyMCE editor with cross-browser support.

**Full-stack Web Developer (Electron, Next.JS, LAMP, MERN stack, AWS)****Nov, 2021 — Jul, 2022***Freelancing**Work from home*

- Led a team of 4 engineers and was responsible for planning, task distribution and timely deliverables.
- Built software for kiosks where implemented middlewares to authenticate transactions between machines and server. For offline payment, used Bill Acceptor Machine to accept Indian currency notes and RazorPay for online payment option.

**Full-stack Web Developer - Intern (Next.JS, React JS, Node JS, PHP, MySQL)****Feb — Dec, 2021***Pandit Deendayal Energy University**Gandhinagar, Gujarat*

- Worked with a team to build a CMS-based front-facing website to handle the content with different access roles and two-layer content verification.
- Responsible for integrating frontend with backend, managing routes, on-page SEO, and deploying frontend and backend to a CentOS server.

**Web Head (HTML5/CSS3, JavaScript, jQuery, AJAX, PHP, MySQL, Firebase) | [Previews](#)****Jul, 2020 — May, 2021***Encode club, Science & Technical Committee and Sports Committee of PDEU**Remote | Gandhinagar, Gujarat*

- Dealt with different clubs and committees to carry out the development of their websites with help of a web team which consists of designers, frontend and backend developers.
- Responsible for planning, task allocation, designing database schemas, module integration and deployment. Developed reusable modules like authentication, blogs, users etc. which can be used in multiple websites just by changing CSS.

**Backend Developer (JavaScript, jQuery, AJAX, PHP, MySQL, Firebase) | [Preview](#)****Nov, 2019 — Feb, 2020***Petrocup 2020 - A sports festival of PDEU**Gandhinagar, Gujarat*

- Engineered an optimal database schema by using MySQL and Firebase, to create live scoring system to show scoreboard of ongoing and past matches on the website.
- Built a portal for admins to manage the registrations and to export various reports in CSV format. Responsible for deployment of website through cPanel.

**PROJECTS**

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**OpenCMS Database (MySQL, Flask, Python)****Jan — Apr 2024***System that converts a static website to dynamic*

- Built a system that helps to convert a static website into a dynamic one. Created an MVP with a CLI-based interface to demonstrate the working.
- Considered performance aspects as well while designing the database schema and using MySQL as the database. Used triggers and procedures to enforce the validation of the incoming data and functions to ease the data retrieval queries.

**SyncWell (React JS, Node JS, MySQL, GitHub Actions, Jest, Firebase hosting)****Jan — Apr 2024***Platform to schedule a meeting hassle-free between two people*

- Outlined the project roadmap and configured the CI/CD pipeline for deployment, ESLint, and Prettier to ensure the coding standards are followed by the team.
- Built the backend in Node JS and used Jest for unit and integration testing. Used Postman to write API test cases for the API endpoints. In addition, integrated Google Meets and Zoom API to generate meeting links dynamically.

**Domain lookup (Chrome Extension API, SCSS, TypeScript, Webpack) | [Link](#)****Mar, 2023***A chrome extension*

- Built an extension that fetches domain information from the Whois database along with the details of the server.
- Integrated APIs from different services including ip2whois and ipgeolocation. Used Google DNS public API to get an IP address of the domain.

## UIDAI - Address Formatting (Python) | [Link](#)

Oct — Nov, 2021

*Virtual Hackathon hosted by Unique Identification Authority of India*

- Participated in a group to develop an algorithm that formats and optimizes the address entered by a user.
- Implemented a logic to map the given address against the CSV datasheet of the Indian Postal Service to validate the area/city/state address and check if any further changes are needed or not.

## OS-VIS (React JS, Material UI, Google Charts API, Firebase) | [Link](#)

Aug — Dec, 2020

*A visual representation of scheduling algorithms of operating system*

- We demonstrated animation of each step that takes place in a scheduling algorithm of the operating system and implemented 7 popular scheduling algorithms.
- Responsible for building the frontend while integrating the animation with algorithms as well as to host the website using Firebase Hosting.

## Contact-less attendance system with body temperature sensing (Node JS, Firebase)

Jun — Aug, 2020

*Virtual hackathon - Let's hack 2.0*

- During the lockdown period, participated in a hackathon with a team for building a product design to sense the temperature of a person using an infrared sensor while marking attendance.
- Responsible for creating REST APIs to connect with mobile applications and to manage companies and employees along with a temperature alerting system.

## ACHIEVEMENTS AND CERTIFICATES

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- **Launched 5 websites within 8 months** with the cooperation of a team in the tenure of Web Head
- **Finalist in UIDAI hackathon** (2021)
- **Finalist in "Let's hack 2.0" hackathon** (PDEU, 2020)
- **Introduction to Internet of Things** (N.P.T.E.L., 2020)
- **Capsule course - Internet of Things** (PDP, 2019)
- **Recursion in SQL** (Stanford University, 2019)
- **1st Prize** in Web Designing (2017)
- Developed a **Windows App** and participated in a competition held in Mumbai **at the age of 13** (2014)

## PUBLICATIONS

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### Diabetes Prediction, using Stacking Classifier | [Link](#)

IEEE, Xplore

*First International Conference on Artificial Intelligence and Machine Vision 2021*

*Sep, 2021*

- Used PIMA Indians Diabetes Dataset for training and testing our model. Compared the performance of 6 different models with a stacked model and achieved an accuracy of 82.68%.
- Published by B. Gandhi, J. Hemnani, S. Patel, V. Gondaliya, V. Khilwani under the guidance of Dr. S. Bharti.
- DOI: 10.1109/AIMV53313.2021.9670920

## PATENTS

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### Device For Attendance With Body Temperature Sensing | [Design Patent](#)

332433-001

*Granted by Intellectual Property India*

*Apr, 2021*

- A prototype design to improve the attendance marking system and sense the temperature of a person to avoid infectious diseases. Responsible for product designing using SketchUp for creating a 3D model of a prototype.
- Developed by B. Gandhi, D. Shah, P. Desai, S. Bhatt, S. Patel under the guidance of Dr. P. Sharma and it is currently under the possession of Pandit Deendayal Energy University and Innovation & Incubation Centre.

## EXTRA-CURRICULAR ACTIVITIES

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- **Technical Blog Writer** on Medium.
- **Advisor** at Encode - The Computer Science club of PDEU for the academic year 2021-22.
- **Web Head** at the **1st International Conference on Artificial Intelligence and Machine Vision 2021** held in PDEU.
- **Web Head** at Encode club, Science & Technical Committee and Sports Committee of PDEU for 2020-21.
- **Speaker in workshops** like Clean Code, Cryptography, Googling, MySQL database and Web Development.
- **Participated in several hackathons** which were organized by the government and different universities.