

# SHUBHAM OJHA

Electrical Engineering (Dual Degree - B.Tech + M.Tech.)  
Dual Degree (B.Tech + M.Tech.)  
Indian Institute of Technology Bombay

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| Examination   | University | Institute             | Year | CPI/%  |
|---------------|------------|-----------------------|------|--------|
| Graduation    | IIT Bombay | IIT Bombay            | 2024 | 7.74   |
| Intermediate  | CBSE       | Bhartiya Vidya Bhavan | 2019 | 96.00% |
| Matriculation | CBSE       | Bhartiya Vidya Bhavan | 2017 | 95.00% |

## SCHOLASTIC ACHIEVEMENTS

- Achieved **All India Rank 533** out of 0.17 million candidates in **JEE Advanced** entrance exam (2019)
- Secured **99.94 percentile** in **JEE Main** entrance examination amongst 1.2 million candidates (2019)

## PROFESSIONAL EXPERIENCE

**Software Development Intern** - Citrix | Summer Internship (May 2022 – July 2022)

- Created cross-platform desktop application using the **VueJS** and **ElectronJS** framework from scratch
- Followed **Component Driven Development** approach to develop components used in the application
- Implemented **Web Workers** for parsing text files greater than 500MB without affecting user experience

**Software Development Intern** - Newzera | Winter Internship (December 2020 – March 2021)

*The firm is developing an AI powered web platform to reinvent the space of online journalism*

- Created various pages and components in the primary web application using the **ReactJS** Library
- Implemented many GraphQL queries using the **Apollo GraphQL** using **MySQL** as the database system
- Tested the developed components using the testing frameworks - **Jest** and **Enzyme** up to **95% coverage**

## KEY PROJECTS

**Traffic-MAN** | Institute Technical Summer Project (March 2020 – June 2020)

- Collaborated closely with a team of 3 other members to design a **fully automated traffic light**
- Integrated **YOLOv3** along with **OpenCV** to extract objects like cars, etc from images in real time
- Constructed an **ML** algorithm to decide the time allotted to each traffic light at the intersection
- Maintained an **OOP** structure for traffic lights and tracked project files with **Git** version control
- Developed a fully functional **Django** web application for showing a demonstration of the project

**Emojify** | Course Project (March 2021)

- Developed a Emotion Detection Classifier using **Tensorflow** on the FERN-2013 dataset
- Trained a **Convolutional Neural Network** with an accuracy of 82% on training and 65% on testing sets
- Implemented **Haar Cascade Classifier** to detect faces and replaced them with emojis using **OpenCV**

**ERC Website** | Club Project (August 2020 – March 2021)

- Coordinated a team of 3 people to remodel the website of the Electronics and Robotics Club from scratch
- Facilitated user-club communication by integrating a contact form on the website using **PHP**

**Flip Food - Website** | Self Project (August 2020)

- Developed the backend modules with a user management system using **Django** Web Framework
- Managed code versioning with **Git** and deployed successfully to staging and production servers
- Handled development of frontend user interface using HTML, CSS, **Bootstrap** and **JavaScript**

**DC Power Supply** | Course Project – Guide: Professor B.G. Fernandes (August 2019)

- Used transformer, **full wave bridge rectifier** and **capacitive filter** to get a 12V DC supply
- Integrated ICs - **LM7805** and **LM7905** in the circuit to get stable 12V and 5V supply at the output
- Soldered the full wave bridge rectifier and the components used on a PCB for use in WEL Labs

## TECHNICAL SKILLS

### Programming Languages

Python, Julia, Golang, JavaScript, C/C++, Java

### Python Libraries

NumPy, Pandas, Seaborn, Matplotlib, OpenCV, Django, TensorFlow

### JavaScript Frameworks

Angular, React, VueJS, NextJS, Nuxt

### Mark-up Languages

HTML, CSS, Bootstrap

## COURSES UNDERTAKEN

|                                    |  |
|------------------------------------|--|
| Maths and Computer Science         | Differential Equations-I, Calculus, Linear Algebra, Complex Analysis, Differential Equations-II, Computer Networks                       |
| Machine Learning and Deep Learning | Introduction to Machine Learning via Python* (Microsoft), Deep Learning with TensorFlow* (IBM), Introduction to Machine Learning         |
| Electrical Engineering             | Introduction to Electrical Engineering Practice, Signal Processing-I, Analog Circuits, Digital Systems, Probability and Random Processes |

(\*MOOC)

## POSITIONS OF RESPONSIBILITY

### Web Manager | Unmesh Mashruwala Innovation Cell (UMIC)

(August 2021 – March 2022)

40+ member technical team with the primary focus on autonomous vehicles in the sky and the ground

- **Reduced operating costs** by shifting website deployed on DigitalOcean from Django to **Nuxt** Framework
- Decreased the server downtime by writing scripts that **automate** deployment of website on the server

### Institute Technical Convener | Electronics and Robotics Club

(June 2020 – March 2021)

Part of two-tiered team of 80+ members organizing competitions, talks, and projects to promote tech culture

- Chosen out of **100+ applicants** after going through a rigorous process of testing and evaluation
- Part of **17 membered core team** aimed to organize **20+ events**, competitions, talks (BLAHs), and hackathons and mentor **1200+** electronics and robotics enthusiasts across the institute
- Strengthened the club's social media presence increasing the reach by **300%** and likes by **50%**

### Marketing Coordinator | Mood Indigo

(May 2020 – January 2021)

Asia's largest college cultural festival | Viewership: 100,000+ | Events: 100+ | Colleges: 2000+

- Worked in a **team of 40** to pursue the budget for 50<sup>th</sup> Mood Indigo through corporate sponsorship
- Ideated upon and executed **brand integrations** with a wide range of events during the festival with the Indian youth as the target group for Brands/Sectors including Airlines, Snack Bars, etc

## EXTRA-CURRICULARS AND OTHER ACHIEVEMENTS

|                      |  |
|----------------------|--|
| Social Volunteering  | Volunteered for IITB's social body Abhyuday's Career Counselling Campaign in collaboration with NCC to make students aware of different career paths   |
| NCC                  | <ul style="list-style-type: none"> <li>• Attended 10-day long NCC Annual Training Camp held during December 2019</li> <li>• Participated in Republic Day Parade held on 26<sup>th</sup> Jan, 2020 at gymkhana ground</li> <li>• Among the <b>18 selected students</b> for Captain's Training Camp out of 150 applicants</li> </ul>   |
| Technical Activities | <ul style="list-style-type: none"> <li>• Completed the Tinkering Bootcamp with AA grade organised by Tinkerers' Lab learning about Arduino, RPi through live sessions, challenges, projects and talks</li> <li>• Completed Web Development Course – Frontend and Backend organised by Web and Coding Club, IIT Bombay during the Learners' Space 2020</li> <li>• Achieved a rating of <b>1400+</b> on the popular competitive coding website - CodeChef</li> </ul> |
| Hobbies              | Interested in football, singing, reading fiction books and dancing   |