

# Dhaval Singh

[dhavalsingh19@gmail.com](mailto:dhavalsingh19@gmail.com) | [Portfolio](#) | Bengaluru, India

## EDUCATION

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### **BITS Pilani - K.K Birla Goa Campus**

*M.Sc. Physics and B.E. Electronics And Instrumentation*

Goa, India  
Expected May 2020

### **St.Xaviers high school**

*Gujarat state board | 12<sup>TH</sup> GRADE | PERCENTILE: 93.45*

Gujarat, India  
May 2014

### **St.Xaviers high school**

*Gujarat state board | 10<sup>TH</sup> GRADE | PERCENTILE: 98.37*

Gujarat, India  
March 2012

## SKILLS

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- **Languages:** C++, C, Java, Python, JavaScript, HTML5
- **Technical Proficiency:** Familiar with networking fundamentals, Spring Boot, ReactJS, Node, PostgreSQL, Cypress, Matlab, Git

## EXPERIENCE

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### **eGovernments Foundation**

*Software Engineer - Microservices Intern*

Bengaluru, India  
Aug 2019 - ongoing

- **Configuring Urban Municipal Websites:** DIGIT is a comprehensive, state of the art Open-source, interoperable and scalable civic tech solution platform. Collaborated in a cross-functional Platform team by upgrading, maintaining and testing core web applications on both backend and frontend of the DIGIT platform based on Microservices software architecture, Java Spring Boot framework, Web Services, Restful web services, JDBC and PostgreSQL.

### **Vedanta Limited**

*Electronics Intern*

Orissa, India  
May 2017 - July 2017

- **Programming PLC in IPP:** Implemented optimization and protection in starting of **Induction motor** using Ladder logic and C programming for Programmable Logic Controller 's(PLC) of the Independent Power Plant.

### **FCIPT, Institute of plasma research**

*Physics intern*

Gujarat, India  
August 2017

- **BN/BNSiO2 sputtering yield shape profiles under stationary plasma thruster operating conditions :** Assisted the research team in the experimental setup with a rotatable **Quartz Crystal Microbalance(QCM)** and helped validate results with the famous **Sigmund, Zhang and Bohdansky** sputtering theories.

## PROJECTS

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- **Personal Portfolio:** I built my own Responsive [webiste](#) with ReactJS. The site content is passed in as JSON data, auto-generating components for easy maintenance.
- **Object detection from Traffic Camera Videos:** A probabilistic graphical model for object detection using *Gaussian mixture model(GMM)*, *Background isolation/foreground detection* and *Bob analysis* to detect, track and count moving objects in traffic camera videos at 25fps.
- **Use of computational Physics in determining Neutron stars as potential gravitational wave emitters.:** *RNS Code(in C)* was used to solve the *Tolman-Oppenheimer-Volkoff (TOV)* equations and further used to construct models of non-rotating, relativistic, compact stars using tabulated equations of state which are supplied by the user.
- **Spirit level reaction time tester:** Implemented a working model of reaction time tester on *Proteus Design Suite*, working around mainly '8255 Programmable Peripheral Interface' and '8253 Programmable Interval Timer' with a 7 Segment Display.
- **Proximity sensing intruder alarm system:** This Project was implemented on Eagle and a PCB was developed and optimised, using *IC NE555* and *LM358 op-amp* as primary components.
- **Short Film - "Perspective":** Director and Writer of "Perspective", 3min-14sec Short film of genre (Thriller/Comedy).

## ADDITIONAL EXPERIENCE

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- Successfully completed and acquired certification on *Networking and Security* by *Nettech*.
- Was Selected and successfully completed *Googles Foobar* challenge.
- Member of *BITSKRIEG*(Bits goa CTF team) and participated in multiple international cybersecurity and penetration testing competitions(Capture-the-Flag).
- Completed a *2 month* online training program by *QSTP*(Quark summer technical program) in *Ethical hacking* and ranked **First** in the *Ice-CTF* organised by them.
- Headed a *career counseling* workshop for 3 days for the local kids on choosing future area of study and preparing for competitive exams as well as Olympiads at a rural village.

## HOBBIES

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- Have been actively *gaming* for last 8-9 years, with active participation in *game development*.
- Co-author of a [blog](#) based on *Film making* and *Reviews*.
- Interested in *PC Building*, *Fitness(Power-lifting)*, *Film making* and *various aspects of interactive media*.