

## Dhruv Kanti Bhanushali

Sophomore, Engineering Physics (EPH),  
Indian Institute of Technology, Roorkee  
(+91) 8171615670  
dhruv.uph2015@iitr.ac.in



### Education

Year	Institute - Board	CGPA / Percentage
2015 –	Indian Institute of Technology, Roorkee – <i>B. Tech. in Engineering Physics</i>	7.706 / 10
2012 – 2014	Jaipuria School, Navi Mumbai – <i>Class XII (PCM + Computer Science)</i>	91.2%
2004 – 2012	Seventh-Day Adventist Higher Secondary School, Navi Mumbai – <i>Class X</i>	95.8%

### Projects

#### Augmented virtual keyboard – *Electronics and computer programming*

This project aims to create a keyboard that can be projected onto any flat surface and then uses multiple sensors and computer vision to detect keystrokes.

It uses a grid of LED beams that reflect off the fingers to detect points of touch by IR cameras. OpenCV is used to identify the coordinates and the relevant touch signal is issued.

#### LecTut – *Android app development*

Developed an Android app of LecTut, the Intranet study portal of IIT Roorkee, used by faculty and students to share and collaborate on study material such as lecture slides and notes, to improve its accessibility from smartphones.

**Backend:** JSON API in Django (Apache + mod\_wsgi)

**Frontend:** Client application on Android

#### Pilo (in progress) – *Node.js app development*

Pilo is a location-based messaging app that allows the user to drop messages at various places and then start an anonymous chat with people in that location, thus eliminating the need to go places for information.

**Backend:** JSON API in Express (Nginx + pm2) + Socket.IO for real-time updates

**Frontend:** Client application on Android

#### Nobel – *Node.js app development*

Nobel is an app that allows people to ping the central computer at IMG lab to see who else is present there. Upon request the app plays a tone on the computer and opens a two-way chat for the person to chat with IMG colleagues.

**Backend:** Authentication in Django (Apache + mod\_wsgi) + views and controller in Express (pm2) + Socket.IO for chat

**Frontend:** Vanilla JavaScript

#### Mazverdagon (in progress) – *Node.js app development*

Mazverdagon is an app that aims to greatly simplify and enhance the process of recruitment of various hobby and specialized groups in IIT Roorkee, providing them with a unified feature-rich portal to organizers and participants.

Still in the early stages of planning

#### Amplio – *Python (Django) app development*

Amplio is an app that can be used to collect and debate upon feedback and opinions. It is currently a standalone application that will, after some enhancements, be merged with the Intranet portal of IIT Roorkee.

**Backend:** Django (Apache + mod\_wsgi\_py3)

**Frontend:** Django templates

#### Rethink – *Python (Django) app development and Windows Active Directory*

Developed an inventory management system, a directory system and a homepage for Rethink, the tinkering lab of IIT Roorkee. These apps work together to manage networked and non-networked resources in Rethink.

**Backend:** Django (Apache + mod\_wsgi\_py3)

**Frontend:** Django admin

**Static:** HTML + CSS + jQuery

### IJAS2017 – *Website development*

Developed the website of Indo-Japan Accelerator School 2017, IIT Roorkee, in HTML and CSS with a bit of JavaScript. This website contains information about IJAS, previous' IJAS material and a form for registration.

**Static:** HTML + CSS + jQuery

## Positions of responsibility

Information management group – *Hub coordinator*

Information management group is the elite computing group that created, maintains and upgrades the technological backbone of IIT Roorkee, including the intranet portal Channel-i and the internship/placement portal.

## Skills

**Software applications:** Wolfram Mathematics, MathWorks MATLAB + Simulink, National Instruments Multisim

**Languages known:** English (SRW), Hindi (SRW), Kutchi (S), Marathi (SRW), Gujarati (SR)

**Databases:** MySQL, PostgreSQL and MongoDB

**Python:** Django and Django REST

**Node.js:** Express, Socket.IO and Adonis

**Java:** Swing and JavaFX

**Android:** Java logic and XML user interface

## Achievements

- Ranked 3110 (GEN) among about 1.5 lakh (equivalent to 150 thousand) students in JEE Advanced.
- Successfully completed two apps overnight as a part of code.fun.do 2016 and 2017.
- One of the most prolific developers in IMG (and therefore, in IIT Roorkee).
- Scored top grades in all computing courses.

## Interests

Apart from software, development I am also interested in Theoretical Physics. I like to unwind with a good film or TV episode. You'll find me plugged to my music almost all the time. I also like to read (fiction) and write (non-fiction).

## References

**Dr. Arumugam Paramasivan**

Associate professor,  
Department of Physics,  
IIT Roorkee

## Details:

For further information, please contact me via any of these social media:

GitHub Portfolio	<a href="https://dhruvkb.github.io/">https://dhruvkb.github.io/</a>
GitHub	<a href="https://github.com/dhruvkb/">https://github.com/dhruvkb/</a>
LinkedIn	<a href="https://www.linkedin.com/in/dhruvkb/">https://www.linkedin.com/in/dhruvkb/</a>
Facebook	<a href="https://www.facebook.com/dhruv.k.bhanushali/">https://www.facebook.com/dhruv.k.bhanushali/</a>