

# Gaurav Bansal

## EDUCATION

### Current

Room No 1102, BH 4  
IIIT Allahabad 211012  
U.P.

### Permanent

H.No. 156, Street No. 3,  
Radaur Road, Yamunanagar,  
Haryana (135001)

### Contact

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Github: <https://goo.gl/zQFQoT>

### Indian Institute Of Information Technology, Allahabad

B.Tech in Information Technology

Batch of 2016

-- CGPA: 8.67 / 10

### Bhagwan Parshuram Public School, Jagadhri

Senior Secondary Examination - Class XII

Batch of 2012

-- Percentage: 80%

### Springfields Public School, Jagadhri

Higher Secondary Examination - Class X

Batch of 2010

-- CGPA: 8.6 / 10

## Skills

- Passionate about building projects which benefit the community.
- Quick to adapt to and use new tools and environments.
- Excited to learn, solve problems, and pass on knowledge.
- Obsessed with design and usability.

## Programming

JAVA (and Android SDK), C, C++, PHP, SQL, HTML5, CSS, JavaScript (and jQuery), Python, Matlab

## Area of Interest

Product Design, Web Applications, Image Processing, HCI, Machine Learning, Android

## INTERNSHIPS/WORK-EXPERIENCE

### Lead Software Developer

June-July 2015

Tesseract Imaging (<http://tesseract.in>) - A spin-off of MIT Media Labs, Cambridge is a product based tech-design company which initially released a 3D camera and currently is working on a 360 viewing camera.

### Initially: Remote Sensing Interfaces For IOT Platforms Over Mobile Devices - Tesseract

Mar- Apr 2015

Android, Flask, Socket Programming, SBC, 360 Image Viewer

Designed and prototyped an android app to control a single board computer(SBC) over wifi. Which included:

- Automatic connection of SBC with android device over wifi.
- Communication of android and SBC via Socket as well as HTTP(Flask).
- Programmed tree based data structure to store walkthroughs (connected 360 images).
- Basic 360 viewer to display 360 (equirectangular) images (used an open source library as base).

System Stack (Nginx, Unicorn, Django), Android, SBC, PostgreSQL, JAVA, Python

Designed and programmed :

- Android app to capture images and walkthroughs via Methane 360 camera.
- Full system stack for images and walkthrough uploading, converting and viewing.
- 360 Viewer for android devices and web. Also programmed VR(Virtual Reality) viewer for android.
- Mentored a team of two.
- Website for company.

Ref: Website(<http://tesseract.in>), Android Model App(<https://goo.gl/2asTp5>), Android App(<https://goo.gl/jafHIY>)

## Internship Program in Technology-Supported Education

Carnegie Mellon University, Winter School

Dec 2014

Research, Image Processing, ANN, Python-flask

Periodic comics in different languages come out every other day or week, but are inaccessible for a long time due to the intensive manual translations efforts required. Our project attempted to automate this process and make comics available in other languages within a day of original raw release with minimal human effort required. The hurdles that we face include automation of complex processes like text detection, extraction, removal, optical character recognition, language translation and text infusion.

**Best Project Award - CMU Winter School'14** - Our project conferred the best project award in Neural Networks for Data analysis / Multimedia Analysis / Computational Models in Civic Problems track.

## Application Developer Intern, Catalyst Labs

Jan 2015

Matlab, Python, Image Processing, Artificial Neural Network(Caffe), SQL

Designed, prototyped and programmed a system that can cut short the process of demand sheet collection & automate detection of input. In this system, the scan of form was processed to fetch the filled-in data(numbers) by means of various techniques in image processing. This was previously entered manually.

## Web Developer - Summer Internship

Indian Institute of Information Technology, Allahabad

May - June 2012

PHP, HTML, CSS, JQuery

Developed a online file sharing portal for IIT-PhD Cell for submissions of project/thesis. It also has a features like sharing files and messaging(to admin). Also learned security management of website and server.

## PROJECTS

### Word Predictor

JAVA, Research, Natural Language Processing, HMM, n-gram

The goal was to predict the word user wants to write based on previously written words and increase typing speed. We prototyped an indigenous word suggester by following a hybrid approach of predicting words based on statistical analysis (n-gram model) and then drilling down the result syntactic analysis (viterbi algorithm) for improvement.

### Augment Text With Images

JAVA, Natural Language Processing, Graph based text reduction, Flickr Image API

The goal was to is to generate a sequence of images from the semantic description of a text document so as to represent the summary of document. We constructed an event extraction system from text which involved graph based text reduction (to decrease search space by searching only on relevant areas) then finding event sequential set of keywords to extract images from the open source Flickr API.

### Online Coding Platform - CodeMania

PHP, MySQL, Shell Script, HTML, CSS

Designed and developed an online C/C++ coding platform to hold coding contests. Learned integrating shell script on apache servers and also multi table SQL queries(ranking are evaluated based on points gained in various contests).

### Location Predictor App - Wanderer

Research, Android SDK, Google Maps, Machine Learning

Developed an android app that used Machine Learning techniques to feature a next location predictor. Incorporated google maps with android app. This app also had features like proximity alert for a location and suggestions from nearby places.

### Vocabulary Improvement App - WordBizz

Android SDK, SQLite, DBMS, CSV

Designed and developed a multiplayer educational vocabulary word guessing game based on sound cues and definitions. Built by embedded database SQLite on Android Framework. Details of 500 cards with 2000 word definitions are stored in a CSV file in the application. Reference - <https://www.dropbox.com/s/ssntqxx8g2xyax/WordBizz.apk?dl=0>

### College Schedule Application - SKED

Android, JAVA, SQL, PHP, JSON, Database version management

Designed and developed an android app that syncs with college databases and updates whenever schedule is updated. Learned syncing android app with a server. Reference - <https://goo.gl/F22Pxm>

### Other projects i have worked on:

- IIITA Technical Society website (<http://geekhaven.iiita.ac.in>).
- Designed Arduino based automated toll booth system.

## LEADERSHIP ROLE'S

### IIIT- Allahabad Technical Society

- **Coordinator of Application Development Society, IIITA.**
- Stack Designer for Technical festival - Aparoksha.
- Developed an web app for updating contact info of students and workers in IIITA.
- Conducted and managed various events like hackathon and gaming contests.

### Events and Technical Head at Aparoksha

Aparoksha is the annual technical festival of Indian Institute of Information Technology, Allahabad. Managed and developed website and various quizzing platforms of festival.

Organizer and Problem Setter at Code-mania, IIIT- Allahabad native coding contests.

## DECLARATION

I hereby declare that the details provided by me in this resume are correct and I have knowingly not omitted/misrepresented any information. I am aware that the company can use this data for verification purposes.

-- Gaurav Bansal