Kalpesh Krishna		140070017	
Electrical Engineering			
IIT Bombay		Male	
		DOB: 30/11/1996	

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2018	9.61
Intermediate/+2	CBSE	Army Public School	2014	98.2%
Matriculation	ICSE	St' Mary's School	2012	98.6%

ACADEMIC ACHIEVEMENTS

- Ranked 3rd in the department among 140 students on CPI basis.
- Secured three **AP Grades** for being in the top 1% of the courses **Basic Biology**, **Computer Programming and Utilization** and **Data Analysis**.
- Amongst the **top 10 in India** at the **Astronomy Olympiad OCSC** (Orientation Cum Selection Camp) for the International Olympiad for Astronomy and Astrophysics '14.
- Cleared the first round of the **Physics Olympiad (NSEP)** and **Chemistry Olympiad (NSEC)** by being one amongst the top 300 in India.
- Secured an All India Rank of **93** in **JEE Advanced '14** among 14 lakh candidates.
- Secured an All India Rank of **34** in **JEE Mains '14** among 14 lakh candidates.
- Secured a **National Rank of 2** in **ICSE '12** and was the **city topper** in JEE Advanced '14, JEE Mains '14, CBSE '14 and KVPY '14.
- Won the **Kishore Vaigyanik Protsahan Yojana '14 (KYPY)** Fellowship Award.
- Awarded by the **Army Welfare Education Society** for the *best academic performance* in Army Schools in CBSE '14. Won the *General Proficiency Prize* for 10 years in school.
- Pursuing a Minor Degree in Computer Science and Engineering.

PROGRAMMING SKILLS

- **Languages:** PHP (with Laravel 4), C/C++, Python (with Django and OpenCV), Java (with Android), JavaScript (with NodeJS and AngularJS), Arduino, Bash, LaTeX
- **Tools:** NgSpice, Adobe Photoshop, AutoCAD, Git, MATLAB/Octave, Processing

WORK EXPERIENCE

Core Backend Developer, *Pickup*   **March '14 - Present**

- Implementing the backend for a recently launched startup - *Pickup*, a ridesharing service.
- Built **RESTful APIs**, designed an **ER Model Database** in **PHP** using the *MVC Framework* **Laravel 4**. Developing algorithms for the same.

In-sem Internship, *Codechef*   **January '15 - Feburary '15**

- Built and mantained a **question bank** as a part of **Codechef for Schools**, an initiative to help high school students start competitive programming.
- Wrote and reviewed **editorials** for the recently added problems on Codechef.

POSITIONS OF RESPONSIBILITY

Convener, *Web and Coding Club - IIT Bombay*   **April '14 - Present**

- **Coordinating events** of one of the largest programming clubs in India aimed at inspiring students to take up programming as a hobby.
- Organised institute-wide workshops to **train more than 100 students** in MIT-Scratch and Linux Essentials.

Coordinator, *Mood Indigo - IIT Bombay*   **July '15 - Present**

- Working as part of a team to develop **Web and Android applications** for Mood Indigo, Asia's largest college cultural festival.

PROJECTS

Web Platform Tests - Results Explorer
James Graham, W3C

November '15 - Present

Mozilla Quarter of Contribution

- Implementing a web application to efficiently read and cache **mozlog** files generated by running WPT tests on different browsers under **Mozilla** (like Servo, Gecko).
- Graphical User Interface to enable fast comparison between the WPT results of various browsers through visualizations and statistics.

Pyraminx Utility Kit
Prof. Kavi Arya

Spring '15

CS 101 Project

- Implemented **BFS graph algorithm and AVL trees** to derive mathematical results about the **optimal solutions of a Pyraminx**, a tetrahedron Rubiks Cube style puzzle.
- Used C++ and Allegro to design an interface to help solve pyraminx optimally, find cube algorithms and generate solve analysis.
- Designed an Android app implementing **image processing techniques** to read pyraminx configurations and send it to a Java server to be solved.

Bluetooth Mesh Network
Web and Coding Club - IIT Bombay

Summer '15

Institute Technical Summer Project

- **Android app** which implements **routing via Bluetooth** using a **Gnutella style flooding algorithm** to send text messages via a chat application.
- Optimized the routing using graph algorithms and routing tables.

Holographic Touch Screen
Electronics Club - IIT Bombay

Summer '15

Institute Technical Summer Project

- Designed an **Infrared LED lined frame** interfaced with **Arduino** to determine the precise location of an object placed in this frame.
- Used this **frame as a touch screen** for a **hologram** created using parabolic and plane mirror and an LCD display as the object.

LED Tetris Board
Electronics Club - IIT Bombay

Autumn '14

Techify Your Room

- Designed a playable compact game of Tetris using two **8x8 LED grids**.
- **Arduino** used for control via software multiplexing.

PERSONAL PROJECTS

- **Contributing** to **Mozilla**, via bug fixes in Firefox OS, Fennec, Servo, WPT, Gecko.
- Mentoring contributors for Firefox OS, Gaia SMS app.
- Active member on **Github** with a number of personal projects in *image processing, Python scripting, BASH, NodeJS and Javscript.*
- A *Django* project to determine one's **Department Rank** using crowd sourcing.
- A *Python/OpenCV, BASH* project to **detect finger contours** and **execute corresponding launcher application**.
- *Python* scripts to **scrape music, lyrics and song metadata** off the internet.
- A set of *Python* scripts to scrape e-mails and **automate e-receipt sending** for College of Engineering Pune, Mock United Nations.
- A **Geography themed quiz game** in *Java* operating on a *MySQL* database containing data about countries.
- A *NodeJS* **chat server** using socket.io
- A number of games such as **Minesweeper, Reversi, Peg Solitaire** and some **basic Physics simulations** in *JavaScript* using DOM manipulations

Relevant Courses

- **Electrical Engineering** :- Electronic Devices and Circuits, Network Theory, Basic Electronics and Electrical Systems
- **Computer Science** :- Data Structures and Algorithms, Computer Networks, Machine Learning (via **coursera**) and Aritifical Intelligence (via **MIT OCW**)
- **Physics and Mathematics** :- Quantum Mechanics, Electromagnetism, Multivariable and Vector Calculus, Linear Algebra, Differential Equations(I and II), Data Analysis and Interpretation and Complex Analysis.

Technical Achievements

- **Runner Up** (4-person team) at the **Microsoft code.fun.do '15** hackathon.
- Stood **7th** in the country in **Technothlon '10** and represented my school with a teammate in **Techniche '10, IIT Guwahati**.
- Attended **Infosys, Catch Them Young** and won the best group software award.
- Stood **1st** among 200 freshmen at **WnCC - Scratch Day '14**. Stood **2nd** among 100 freshmen at **WnCC - Website Making '14** for my personal homepage.

Extra Curricular

- **Karate** :- **Black Belt First Dan** trained in *Kyokushin Kai* for seven years.
- **Abacus** :- **Grand Master** in *Aloha Abacus and Speed Maths*.
- **NIE Student of the Year '11** for all round performance.
- **Filmmaking** :- Actor in the winning video for *Freshiezza - Copy a Scene, Freshiezza - Music Video*, and lead actor in special mention video for *Freshiezza - Music Video*.
- **Quizzes / Logic** :- **Winner** of *Whizz Kid '12*, **3rd** at *Mood Indigo Treasure Hunt '14*, **2nd** at *Rotary Club Logic Competition '10*, represented school at various **Inter-School quizzes**, **Finalist** at *Freshiezza Entertainment Quiz*
- **Football** :- Completed **NSO** (National Sports Organization) in Football. **Finalist** at *Fresher's Football League*. Part of **Inter Hostel General Championship team**.
- **Other** :- **1th** at *Wolf of Wall Street, E-Cell IIT Bombay*, **Designed Logo** for filmmaking YouTube channel,**Winner** at *Freshiezza - Band Imitation*, **Debator** at Intra-School Level,
- **Interests** :- **Star Gazing**, **Jogging**, **English Music** and **Travelling**. Have travelled to several countries in West and East Europe, Australia, New Zealand, Dubai, South Africa, Egypt and South East Asia.