# Curriculum vitae

**Vedant Agarwala**
Age: 23
Final Year Undergraduate Student
Computer Science and Engineering
National Institute of Technology, Durgapur
(West Bengal, India)

## Online Experience:

I regularly submit and have accepted patches for bug fixes, feature additions, and code cleanings in various open source organizations (all written in C++). Hence I have strong knowledge of object oriented programming concepts, software development and algorithm design in C, C++, Qt framework, as well as basic knowledge of System Programming (LINUX), the POSIX library, CMake, Python, Bash and shell scripting. Free and Open Source Software gave me experience with working on widely used software (KDE, Ubuntu), command line tools (Vi, GNU Nano); software development life cycle, version control (Git, Bazaar), scalability, reading and modifying code of open source projects with about hundred of files in its source code.
I have been invited for a **sponsored trip to Switzerland for KDE's Randa developer Sprint**.
I contributed to:

- Under K Desktop Environment (**KDE**): Akonadi (PIM storage service), Rekonq (web browser), Amarok (music player)
- Mixxx DJ Software.

I have passed **Season of KDE 2013** for the project "Improving and modularizing Tag Guessing" for KDE's music player-Amarok. My project was to update the Tag Guessing feature (finding missing "tags" like album, artist, etc. for a song): Changing existing code to a modular structure so that multiple providers of a tag guessing service can run simultaneously and fetch results, minimizing code duplication by implementing polymorphism, improving the existing MusicBrainz Provider, and add more providers (like AcoustID, LastFM).
I got selected for **Google Summer of Code 2014** for the idea I proposed: "Lyric Support Improvement". Amarok has a Lyrics Display feature that fetches and displays the lyrics of tracks. I made the static text of lyrics highlight line by line as the track played, according to the timestamps in the lyrics file. Amarok now downloads timestamped lyrics.

I created an ecommerce website that was suppose to be manndi.in. It was fully functional: including server configuration, domain, front-end GUI, backend web-service and database management. It had an admin panel to edit the products on the website, track orders, set up payment gateways, etc. I tested it in production. It was based on the ruby on rails platform, running on a ubuntu server on an Amazon EC2 instance deployed on Nginx using Capistrano.

## On-site Experience:

I worked at a startup, **Betaglide**. It provides an app analytics software platform that monitors important statistics (memory, network, etc.) of a client app in real time and displays it on its online dashboard. I worked with them thrice, each time for 3 weeks:

- First (during October 2013 i.e. third year of college), I added a feature of gathering networking data i.e. bytes sent and received by the app, excluding the data sent to the Betaglide server.
- Then, I worked during December 2013 and added another feature. This time I used the java Instrumentation and Reflection API to enable the Betaglide library to collect information about crashes.

- In June 2014, I wrote a testing library for the Betaglide library, using JUnit and the Android Testing Framework. I created its architecture and wrote the basic tests. I created an easy to understand modular structure, and made the library "mock" the Betaglide library with minimal changes to the original.

Training at **Apt Software Avenues Private Limited** for 2 months in the summer of 2012 (i.e. first year of college). I Made the following desktop apps using Java Swing:

1. Tic-Tac-Toe game
2. Map Application: that is capable of navigating the Open Street Maps, creating (Local) "Waypoints" with info headers.
3. Chat Application: that is capable of sending/receiving chats and files over the internet/LAN using the XMPP protocol.
4. Spell Checking App: Using a web service, this app would indicate incorrect spelling and provide spelling suggestions for inputted lines of text.

Training again at Apt Software Avenues for 2 months in the summer of 2013 (i.e. second year of college). I Made two android apps:

1. Akshar: A character recognition app. It senses the path traced on the device and interprets it to a meaningful character. Currently it recognizes hindi numerals (also, 'space' and 'backspace').
2. Mafia: The party game played by greater than 5 players. It eliminates the need for cards to assign roles, also the need for another person to conduct the game.

## Academics:

- Passed ICSE (10th std) in 2008 from St. Xavier's Collegiate School, Kolkata (India) with an aggregate of 93%
- Passed CBSE (+2 std) in 2010 from Kalyani Public School with an aggregate of 67%
- Secured All India Rank of 7,060 in (IIT) Joint Entrance Examination 2011.
- Secured National Rank (in Overall category) of 10,364 in All India Engineering Entrance Examination (AIEEE) 2011. Hence took admission in NIT, Durgapur in the department of Computer Science and Engineering.
- Grade Point Averages (GPAs) in college (out of 10):

| Semester | 1st | 2nd | 3rd | 4th | 5th |
|---|---|---|---|---|---|
| **Semester GPA** | 7.94 | 6.46 | 6.60 | 6.28 | 6.44 |
| **Cumulative GPA** | 7.94 | 7.20 | 7.06 | 6.82 | 6.74 |

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