Vedant

CONTACT INFORMATION	4th Year Undergraduate Student Indian Institute of Technology Delhi New Delhi, India	mobile: +91 7838662436 e-mail: cs1100263@cse.iitd.ernet.in webpage: `www.cse.iitd.ernet.in/~cs1100263`

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EDUCATION

Indian Institute of Technology, Delhi, India   **Jul 2010 – present**
B.Tech in Computer Science and Engineering

- Expected graduation date: May 2014
- Cumulative Grade Point Average: 8.734

UNDERGRADUATE THESIS

Optimizations in a volatile D2D Network of Devices   **Jul 2013 – present**
Supervisor: Prof. Vinay Ribeiro

- Implementing a D2D network among android devices for optimal bandwidth sharing.
- Optimizing key factors like latency, cost, data rate and distributed caching.
- Designing a P2P protocol for file sharing , gaming etc. based on the Intel's CCF framework.

INTERNSHIPS

Automated Cellular Monitoring   **May 2013 – Jul 2013**
Research Intern, Bell Labs, India

- Automated root cause analysis of 3G cellular network using data analysis and machine learning.
- Constructed regression trees from data-set containing performance indicators and counters.
- Generated human readable rules which highly reduced manual intervention in root cause analysis.

INDEPENDENT PROJECTS

Mobile Application for Disaster Scenarios (Indo-UK Project)   **Jan 2013 – May 2013**
Funded By: India-UK Advanced Technology Centre

- Developed an android app with opportunistic network forming capability among devices.
- Designed an early warning framework which translates messages and speaks them out.

Disability Research using Microsoft Kinect   **May 2012 – Jul 2012**
Awarded Summer Undergraduate Research Award

- Automated the analysis of electronic travelling aids(ETAs) using image processing and kinect.
- Conducted several trials with visually impaired people to rank the ETAs based on their feedback.

OTHER PROJECTS

PintOS (Operating Systems)   **Jan 2013 – May 2013**
Implemented syscalls for user programs, virtual memory, scheduler, buffer cache and file-system for the instructional operating system PintOS.

Car Racing Game with Multiple Graphical Effects (Ogre 3D)   **Jul 2012 – Nov 2012**
Designed a car racing game with several graphical effects as real-time shadows, dynamic reflection, particle effects (nitrous boost, smoke), motion blur, skid marks (using projected decals) & lens flare.

Workflow based Room Booking system (Software Development)   **Oct 2011 – Nov 2011**
Implemented a workflow based room booking system serving as an interface to book rooms inside IIT. Used demon processes, file locking, threading ,database management, networking & gtk.

Multi-Utility Object Locater (Embedded Device)   **Jul 2012 – Nov 2012**
Developed an embedded device with object locator and classifier(using RF) to assist visually impaired. Implemented detection of human, colour & ambient light and measure of depth & temperature.

Automated Grading System (Machine Learning)   **Jul 2013 – Nov 2013**
Designing a system for automated grading of student written essays using the data from kaggle.com.

Implementations (Digital Image Analysis)   **Jul 2013 – Nov 2013**
Implementations of median cut, seam carving, image registration, compression & stitching.

Multi Player Online Carrom Board (OpenGL & Sockets)   **Jul 2011 – Oct 2011**
Developed the game of carrom using OpenGL and Socket programming which can be played over a network. Devised the Artificial Intelligence for the computer to play carrom against a human.

PROGRAMMING

C, C++, Java, Python, Matlab, LaTeX, SQL, SML, HTML, JavaScript, shell scripting.

COURSES DONE	Introduction to Computers and Programming, Discrete Mathematical Structures, Data Structures, Computer Architecture, Programming Languages, Analysis and Design of Algorithms, Operating Systems, Machine Learning, Computer Networks, Computer Graphics, Digital Image Analysis, Digital Hardware Design, Design Practices in Computer Science, Embedded System Design Lab, Digital Electronics, Signals & Systems, Differential Equations, Algebra & Matrix Analysis, Probability & Stochastic Processes, Micro Economics, Macro Economics.

SCHOLASTIC ACHIEVEMENTS

Summer Undergraduate Research Award for disability research using Microsoft Kinect.

IITD Semester Merit Award for semester rank 1 in the department during the 3rd semester.

Awarded the **Kishor Vaigyanik Protsahan Yojana (KVPY)** fellowship in 2009;

Awarded the prestigious **National Talent Search Examination(NTSE)** scholarship in 2008.

IIT-JEE: Secured an AIR 69 (OB) in the IIT-JEE qualification examination in 2010.

Awarded the **Best Project Appreciation Certificate** by Kritikal Solutions for the project.

Secured **94.6%** in 12th board (Senior Secondary) and **94.2%** in 10th board (Secondary) examinations.

EXTRA CURRICULAR ACTIVITIES

Website Development (Blood-Connect)
- Revamped bloodconnect.org, an online portal to bring blood requests and donors together.
- It has saved 15,000 lives so far; served more than 500 blood requests in cases of emergency.

Yahoo HackU (Web Based Applications)
- Developed a chat notifier which sends a sms whenever a certain friend comes online on facebook.
- Developed a political relations graph using NLP on the data mined from RSS feeds of newspapers.

Microsoft Appathon: Developed windows phone apps and secured the 1st prize.

Chrome extensions & Android apps : Developed chrome extensions and games on android.

Coding: Actively participate on algorithmic competitions like **codechef** and **topcoder**.

POSITIONS OF RESPONSIBILITY

Chief Editor, Journalism, (Board For Students' Publications)   (Apr 2012 – Apr 2013)
- Conducted magazine workshops & trained a team of 10 editors to compose magazine pages.
- Led a team of 22 reps to cover various campus events & fests; Compiled 3 newsletters.

Core Team Member, Literati (Literary Fest)   (Sep 2012 – Sep 2012)
Assisted the General Secretary and Overall Coordinators in Managing a 3 tier team of over 100;
- coordinating departments of publicity,events,infrastructure & hospitality.
- Executing a run-up to Literati 2012; a series of online & campus events generating buzz.

Hostel Representative, English   (Apr 2011 – Apr 2012)
Represented my hostel to a Board for Students' Publications **runner's up trophy**.