Ajay Sharma

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EDUCATIONAL QUALIFICATIONS

Year	Degree/ Certificate	Institute	CPI/Percentage
2012 - Present	B-Tech, Computer Science and Engineering	Indian Institute of Technology Kanpur	7.1/10
2011	AISSCE(Class 12th, CBSE)	Vidyagram International School, Jaipur	86.6
2009	AISSE(Class 10th, CBSE)	Vidyagram International School, Jaipur	91.1

SCHOLASTIC ACHIEVEMENTS

- **IIT-JEE** Examination: All India Rank of 144 out of half million students.
- **AIEEE** Examination: 99.4 Percentile out of 1.5 million students.
- Received the **Academic Excellence** certificate from CBSE to be among the top 0.1 percent of students. A score of 100/100 in Mathematics (Class 10th).
- School topper in NSTSE – 2009. Rank 1800 at National level.
- 1st position in the 2nd (final) stage of Meritorious Excellence Reward and Intellectual Test - MERIT09' conducted by Career Point.
- **Scholarships Received:**
  - Student Benevolence Fund (SBF) at IIT Kanpur for the year 2012-2013.

PROJECTS

COURSE PROJECTS:

- An implementation in python of **Facial Key Points Detection using Convolutional Neural Networks** for the course Artificial Intelligence (CS365A CSE, 2014-15 II-semester).
- A **robotic arm motion planner** in python for the course Artificial Intelligence (CS365A CSE, 2014-15 II-Semester).
- A **Python compiler** written in C for the course Compilers (CS335A CSE, 2014-15 II-semester).
- An **E-Mail client written in Haskell** for the course Functional Programming (CS653A CSE, 2015-16 I-semester). https://github.com/SharmaAjay19/FunctionalProgrammingProject
- A project implementation of the **Domain Name System** to demonstrate its working for the course Computer Networks (CS425A CSE, 2015-16 I-semester). https://github.com/SharmaAjay19/ComputerNetworksProject
- Nursery, IITK Web-article in IITK-Wikipedia for the course Composition Skills in Computer Science (CS300A CSE, 2014-15 I-semester).

INDEPENDENT PROJECTS:

- Built a Linear Equations in many variables Solving program using matrices in C (developed using multidimensional arrays)-(2012-13 II-semester). https://github.com/SharmaAjay19/Solving-linear-equations-in-many-variables

INTERNSHIPS

Organization: Amazon Development Center, Hyderabad Duration: 2 months (11 May – 10 July 2015)
Team: Amazon Home Services (Value Added Services – Fixed)
Project title: Coverage Area Selection through Geo-spatial visualization in Post-GIS.
Description: The service providers have to select an area (in the form of a ZIP code) in which they offer services and this is called the coverage area. In the earlier model of the coverage area selection process, a list of all ZIP codes in their region (mapped in a database) was displayed in the form of checkboxes. This could not give them any idea of where the ZIP codes are located geographically.
The project aims to make this process more interactive and descriptive. Service providers give us a central ZIP code and a radius (in miles) up to which they want to offer their services or they can also draw a polygon on the map to denote their region of interest. We show all the ZIP codes lying in that region on a map (implemented in an Iframe) and allow users to select and remove whichever zip code they wish by just clicking on it. The set of finally selected ZIP codes forms their coverage area. At the same time it avoids the costly reverse geocoding queries that Amazon does to the Nokia Maps API. A PostgreSQL database contains geographical location of ZIP codes (accessed through controllers made in Spring MVC framework). It has a Post-GIS extension that supports geo-spatial queries and has lesser latency.

EXTRA CURRICULAR ACHIEVEMENTS

- **National Cadet Corps(NCC)**
  - Conducted the **Anti-Malaria** campaign in the outskirts of IIT Kanpur.
  - Participated in the Blood Donation Camp organized by 2 U.P. Composite Technical Regiment, IIT Kanpur.

POSITIONS OF RESPONSIBILITY

- **Executive,** Social Initiatives, **Techkriti'14, IIT Kanpur.**
  - Organized the **Uttarakhand Flood Relief Campaign** in association with the NGO Goonj.
  - Active member in the **Claus for a Cause** initiative on Christmas'13 to help foundling children.

TECHNICAL SKILL SET

- **Programming Languages:** C/C++(with openGL) , Python, Java, Haskell, HTML, JS, PHP, BASH, Perl, Assembly Language
- **Data Structures/databases/Frameworks:** BST, Lists, B+ Trees, Queue, Stack / MySQL, PostgreSQL, MongoDB / SpringMVC, Apache, phpLDAPadmin.
- **Softwares/Editors Knowledge:** Google Sketch up, Latex, Vim, E-macs, Eclipse, MS Office, Notepad++, Netbeans.
- **Operating Systems:** Windows, Linux (Ubuntu, Fedora, Red hat).

RELEVANT COURSES DONE

CODE	COURSE NAME	CODE	COURSE NAME
ESC101	**Fundamentals of Computing**	CS251	**Computing Laboratory-I**
MTH102	**Linear Algebra and O.D.E**	CS202	**Logic in Computer Science**
CS201A	**Discrete Mathematics**	CS210	**Data Structures and Algorithms**
CS220A	**Computer Organization**	MSO201	**Probability and Statistics**
CS330A	**Operating Systems**	ESO203A	**Introduction to Electrical Engineering**
CS252	**Computing Laboratory-II**	CS203	**Abstract Algebra**
CS365A	**Artificial Intelligence**	CS315A	**Database Management Systems**
CS335A	**Compilers**	CS340A	**Theory of Computation**
CS425A	**Computer Networks***	CS653A	**Functional Programming***

***** Ongoing courses.