

KARTIK ARORA

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Objective

As a Web Development, Application Development and Algorithm enthusiast, I am looking for professional avenues to increase my knowledge, gain valuable experience and expand my skill set. I am a skilled communicator aspiring to become a strong leader, capable of establishing and promoting team cohesiveness, while maintaining a focus on the bottom line.

Education

July 2013 to present	B-Tech (Information technology) – 6 th Semester Indian Institute of Information Technology, Allahabad	8.58CGPA
2011-2012	Senior Secondary Examination - Class XII St. Anselms Sr. Sec School, Alwar (CBSE)	96%
2009 - 2010	Secondary School Certificate - class X St. Anselms Sr. Sec School, Alwar (CBSE)	9.6CGPA

Projects Undertaken

Time Table Management Software – 6th Sem Mini project [IIIT-Allahabad, under Dr. K.P. Singh] (ongoing project)

Time table allotment is a NP Complete problem that needs to be solved using constraint satisfaction. This project is being implemented without using backtracking and optimized using neural network optimization (Hopfield Neural Network).

Tools/Languages/IDE Used: NetBeans 8.1, JavaFX for front end, CSS for styling and Java for coding the logic

Smart Bike Sharing System – 5th Sem Mini Project [IIIT Allahabad, under Prof. Dr. OP Vyas(Dean, R&D)]

Implementation of a smart and fully autonomous bike sharing system for a city.

Project was divided in three phases:-

- Setting up a website from which users can book bikes online, view current station status, their profile info including credits remaining in their smart card and a station map.
- Analysis of data of similar previous efforts of bike sharing programs so that there is no over-availability and no under-availability of bikes at any station at any time and bikes transportation costs are reduced.
- Equipping bikes with smart sensors that would sense real time simulation data like traffic pattern and pollution statistics and send the data in real time to base stations (directly, if possible else by hop communication via other bikes).

Tools/Languages Used: LAMP server, MySQL, PHP, HTML, JavaScript, CSS, Twitter Bootstrap, NS2, TCL, R

Face Recognition using PCA

Understanding the Principal Component Analysis algorithm and implementation in MATLAB for recognition of an input face by matching with eigen faces of the face pictures kept in database.

Tools Used: MATLAB

Chat Application – 5th Sem [IIIT-Allahabad, under Dr. Jagpreet Singh]

This was given as a Lab assignment, aimed at making a chat client (chat software) which could handle multiple users for group chat. Special things included database to maintain credential of users, SSL encryption on the packets transferred and any user can disconnect at any point of time.

Tools/Languages/IDE Used: NetBeans IDE 8.0, Java Swing for making the GUI, Java Sockets etc.

HTTP Proxy – 5th Sem [IIIT-Allahabad, under Dr. Jagpreet Singh]

Designed a web proxy server that parsed HTTP requests and then sent those requests to the actual server. Highlights were understanding the basic concepts of HTTP requests and blocking of some requests if needed.

Tools/Languages/IDE Used: NetBeans IDE 8.0, Java Swing for making the GUI, Java Sockets etc.

Online Feedback System – 4th Sem [IIIT Allahabad, under Prof. Dr. O.P. Vyas (Dean, R&D)]

A feedback system for university students where students can give feedback related to their courses and teachers can view their respective feedbacks.

Tools/Languages/IDE Used: LAMP server, MySQL, PHP, HTML, JavaScript, CSS, Twitter Bootstrap.

Implementation of HEFT Algorithm – 4th Sem [IIIT-Allahabad, under Dr. Jagpreet Singh]

Understanding the Heterogenous Efficient Finishing Time algorithm and Implementation in an OOP Language (C++) and a functional programming language (CLISP).

Tools/Languages/IDE Used: Common LISP, C++, CodeBlocks and Vim editor.

Market List – Android App

An app designed to facilitate easy and paper list free shopping where users can add and new lists, new items to existing lists, mark an item bought and delete items from the list.

Tools/Languages/IDE Used: Android, Android Studio.

Tic-Tac-Toe – Android Game

A basic game of Tic-Tac-Toe in android

Tools/Languages/IDE Used: Android, Eclipse IDE.

Applet Communication – 3th Sem [IIIT Allahabad, under Prof. Dr. O.P. Vyas (Dean, R&D)]

A project on communication between Java Applets in real time, changing colors and playing audio/video via communication between applets.

Tools/Languages/IDE Used: Java Applets.

Skill Set and Interests

- Programming Languages: C, C++ (Intermediate), Java(Intermediate - including JavaFX, Java swing), SQL, Basics of R, CLISP, Prolog.
- Web Technologies used: HTML, CSS, JavaScript, Twitter Bootstrap, PHP, MySQL.
- Operating systems used: LINUX (Ubuntu, Fedora), Cent OS, Windows.

Tools Used: CodeBlocks IDE, NetBeans IDE, Oracle, MATLAB, Wireshark, MySQL, LAMP, Eclipse, AS.

- Area of Interest: Data Structures and Algorithms, Database Systems, Android App Development, Web Development, Competitive coding.

Accomplishments

- Ex - Member, Acoustics and Media Society, IIIT Allahabad (2013 – 2015)
- Volunteer for 7th Science Conclave – an intellectual gathering of Noble Laureates (2014)
- Held responsibilities for the smooth conductance of Effervescence 2014, annual fest of IIIT Allahabad under Acoustics and Media Society (AMS).
- School Head Boy (2009 – 2010)
- House Prefect (2008 – 2009)
- National Science Olympiad district topper (2008 - 2009)
- International Mathematics Olympiad district topper (2009 - 2010)
- Active in sports (2nd position in school level shot put (2011 – 2012) and 3rd position in school level relay race (2011 – 2012))

Related Coursework

Data Structure and Algorithms
Artificial Intelligence
Operating Systems
Theory of Computation
Principles of Programming Language
Compiler Design

Database Management System
Object Oriented Methodologies
Design and Analysis of Algorithms
Computer Networking
Software Engineering
Data Mining