#### Ritesh Sharma

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**OBJECTIVE** 

To pursue higher education in the field of Computer Science and contribute to the society being a computer scientist.

**EDUCATION** 

Bachelor of Technology in Computer Science & Engineering GPA: 8.45/10 Siliguri Institute of Technology under West Bengal University of Technology Graduation: Aug. 2010

**ACADEMIC HONORS** 

Scored 9.08 in the final semester, securing 3rd position in the Computer Science & Engineering department.

Scored highest marks in Secondary School Examination in the ward and received certificate of merit from Howrah Municipal Corporation.

RESEARCH **EXPERIENCE**  Research Assistant, Department of Civil Engineering, Indian Institute of Technology Bombay, India

Oct '10-Present

Working as Research Assistant in the MHRD (Govt. of India) funded project "Virtual Laboratory on Urban Transportation System Planning". Tasks include:

- Design and develop web-based simulation for the postgraduate student.
- Implement and optimized different algorithms for Four Stage Demand Modeling Experiment conducted under Urban Transportation System Planning Laboratory.
- Design GUI for interaction with the simulations and for network editor.
- Develop and Manage database for each experiment's content as well as user information.

**ENGINEERING EXPERIENCE** 

Web developer & Administrator, 10<sup>th</sup> International Conference on Transportation Planning & Implementation Methodologies for developing countries (TPMDC), May'12-Oct '12 2012, IIT Bombay, India,

Worked as Web Developer at Department of Civil Engineering, IIT Bombay Tasks include:

- Designed and developed the website.
- Created portal for paper submission as well as reviewing.
- Maintain database as well as web server.
- Answering queries related to database.

VOCATIONAL TRAINING

#### MCA PL e-business catalyst. Kolkata. India

Completed one week training on **J2EE** with a grade of "B+". Apr '10-Apr '10 Skills acquired:

- Learnt Java Server Pages (JSP) and Servlet Programming.
- · Learnt database connection with JSP and Servlet.
- Acquired knowledge about JAVA Beans as well as EJB.

Jul '09-Aug '09

#### Hewlett Packard (HP), Kolkata, India

Completed five week intensive training in Computer Networks. Skills acquired:

- Learnt core concepts of Computer Network.
- Learnt implementation and functionality of both software and hardware in computer networks.

Jul '08-Aug '08

#### Appin Knowledge Solutions, Kolkata, India

Completed six week intensive training in the technology area **Microsoft.NET** *Skills acquired*:

- Learnt basic concept of .NET Framework and JIT Compiler
- Learnt ASP as well as VB.NET coding.
- Deployed windows as well as web application.

#### COMPUTER SKILLS

Programming Languages: C, C++ Java, PHP, Visual Basic, Microsoft. NET, SQL

Operating Systems: Linux, Windows NT/XP, Linux

Applications: SPSS, R-Software, Microsoft Office, MatLab

Database: MySQL, ORACLE 10g

Web: HTML, Dream Weaver MX, Java Script, JQuery

#### RESEARCH PROJECT Oct '10- Present

# URBAN TRASPORTATION SYSTEM PLANNING VIRTUAL

LABORATORY, IIT Bombay, India

Virtual lab is a project which is funded by MHRD (Ministry of Human Resource & Development), Govt. of India, in order to provide access to experiments which are costly for some colleges to conduct due to lack of sufficient infrastructures, like costly instruments, software, etc. The entire project is being developed using PHP, Java and MySQL is used as database for storing information.

# T-INTERSECTION SIMULATION TO AVOID VEHICLE COLLISION USING JAVA

Logic for Random vehicle generation and assignment, Car Following Rule, Crash Avoiding Rule were included to display and formulate the collision free movement of vehicle.

#### VEHICLE DETECTION AND TRACKING

Detect and trace path of each vehicle at the intersection using methods like Background Subtraction, Thresholding, PCA technique, etc. The main objective of the project is to detect vehicle type, trace the trajectory, speed and other parameters required for analysis of survey data in transportation engineering. The work is in progress.

## ACADEMIC PROJECT

### **SALES INVOICE SYSTEM (B.Tech Project)** under Lect. Jayasree Sinha.

The Sales Invoice System is one of the most used software now days. The main objective is to design and develop software that can have features like Automatic bill generation, accurate updation, Removing errors, etc. The entire project is implemented taking JSP as front end and Oracle as back end.

### LIBRARY MANAGEMENT SYSTEM under Prof. Alok Basu (HOD CSE)

The Library Management System is software used for monitoring and controlling the transaction in the library. This project was developed using J2EE with ORACLE 10g at the back end, which mainly focuses on basic operations in a library like adding new member, new books, and updating new information, searching books and members and facility to borrow and return books. The project was a part of the competition "IBM, The Great Mind Challenge (TGMC) 2009".

#### PUBLICATIONS/ PROCEEDINGS

Patil, G. R., Sharma, R., Jadhav, S., Tripathy, D., Singh, A. K., Sardar, V. H., and Chaudhary, A. C., Virtual Laboratory on Urban Transportation System Planning Laboratory, 10<sup>th</sup> International Conference on Transportation Planning and Implementation Methodologies for Developing Countries (TPMDC 2012), Mumbai, India, Dec 12-14, 2012. (Poster Presentation).

Sharma, R., Jadhav, S., Tripathy, D., Sardar, V. H., and Patil, G. R., Virtual Laboratory: An alternative approach to Urban Transportation Systems Planning Lab, submitted for the conference and *Journal of Transportation Research Board* to be published in January, 2014, USA. (Result awaited, not published yet)

#### PRESENTATIONS/ TALKS

Presented talk on "Virtual Reality & its Application" at Siliguri Institute of Technology, India in 2009.

Presented oral presentation on "Network Interface Card" in a seminar held at Siliguri Institute of Technology, India in 2010.

# EXTRA - CURRICULAR

Coordinator of the Computer Science and Engineering Department for the wall-magazine named "The Horizon" published by the **Department of Engineering Sciences and Humanities** in 2007 and also published poems and articles related to science and society.

Project Leader of the team **SITELLIGENCE**, **mentored** by Prof. Alok Basu (Head of the Department of Computer Science & Engineering), which participated in the project competition "**IBM**, **The Great Mind Challenge** (**TGMC**) **2009**" held at Bangalore, India.

Active member of organizing committee in National Conference, InTranSe 2011, conducted by CDAC, Trivandrum at IIT Bombay, India

Active member of technical and scientific committee in the International conference for Transportation Planning & Implementation Methodologies for Developing Countries (TPMDC), 2012 at IIT Bombay, India

#### EXTRA CO-CURRICULAR

Achieved **3rd rank** in the Drawing competition conducted by **Kolkata Traffic Police** during **Road Safety Week, 2001**.

Achieved **2nd rank** in the Quiz Contests conducted by Society of Human Growth, Kolkata, India and Salkia Bharat Sangha, Howrah, India in the year, **2002**.

Won 2nd prize in the Kolkata chapter of All Bengal SPELLinc Competition, 2003 and led team to Grand Finale of All Bengal SPELLinc Competition, 2003.

Lead the school quiz team up to top 8 schools in the **QUEST 2006**, an inter-school Science Quiz competition conducted by Birla Industrial & Technological Museum, Kolkata, India.

Team Manager of **Institute Football League**, 2012 at IIT Bombay, India. and Player of the Cricket, Football and Hockey Team in Hostel GC 2012 at IIT Bombay, India.

Wrote poems for the school magazine and the poem named A Land called India was published in the **Hindustan Times**, a reputed newspaper in India.

# COMMUNITY SERVICES

Volunteered **Blood Donation** Camp at **Siliguri Institute of Technology** in 2008 and at **AMRA KAJAN**, A social club at the nearby locality at Howrah, India in 2005.