

# Curriculum Vitae

## Ankur Rana

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Date of Birth: December 06, 1987  
Gender: Male  
Marital Status: Married  
Nationality: Indian



## Profile

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A hardworking, tenacious and determined individual, possessing excellent interpersonal communication skills, I am able to build relationships with a wide range of people. Able to work effectively on my own initiative or within a team I can adapt very quickly to people, attitudes and changing environments. Possessing strong logical and analytical reasoning skills enabled me to excel in research work.

## Education

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**Department of Computer Engineering, Punjabi University, Patiala** **2012-2017**

PhD in Faculty of Engineering

- **Title:** Development of Language Model Based Optical Character Recognition System for Urdu Script
- **Supervisor:** Dr. Gurpreet Singh Lehal

**Department Of Computer Science & Engineering, Punjabi University, Patiala** **2009-2011**

Master of Technology in Computer Science & Engineering (**Percentage: 86.13%**)

- **Major subjects:**
  - Software Engineering, Database Technology, Digital Image Processing, Neural and Fuzzy Logic, Data Structures, Computer Graphics.
- **Major Degree Project:**
  - **Dissertation:** Development of Punjabi Sentiment (Opinion) Analyzer, under the Guidance of Dr. Vishal Goyal, Punjabi University, Patiala.

**RIMT Institute of Engineering, Mandi Gobindgarh** **2004-2008**

Bachelor of Technology (B-Tech) in Computer Science (**Percentage: 76.07%**)

- **Major subjects:**
  - Computer Architecture, Software Engineering Analysis & Design, Data Structures & Programming Methodology, Relational Database Management Systems, Systems Programming, Data Communication, Computer Networks, Digital Circuits & Logic Designs, Design and Analysis of Algorithms, Operating Systems, Object Oriented Programming

**Govt. Senior Secondary School, Tripuri, Patiala (Senior Secondary Education)** **2002-2004**

**Major subjects:** English, Physics, Chemistry, and Mathematics (**Percentage: 65.11%**).

**Sun Flower Model Senior Secondary School, Patiala** **2001-2002**

**Major subjects:** English, Science, Mathematics, and Social Science (**Percentage: 83.5%**).

## Training and Work Experience

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**1) System Analyst at Punjabi University Patiala** **November 08, 2016 to Till Date**

Working as System Analyst at Advanced Centre for Technical Development of Punjabi Language, Literature and Culture, Punjabi University Patiala.

**2) System Analyst at Punjabi University Patiala** **July 09, 2015 to June 30, 2016**

Worked as System Analyst at Advanced Centre for Technical Development of Punjabi Language, Literature and Culture, Punjabi University Patiala on Project “Development of Robust Document Image Analysis and Recognition System for Printed Urdu Script”.

### **3) Project Consultant at Punjabi University Patiala**

**March 04, 2014 to March 31, 2015**

Worked as Project Consultant at Advanced Centre for Technical Development of Punjabi Language, Literature and Culture, Punjabi University Patiala on Project “Enhancing Communication and Co-operation across South Asia: An ICT Solution to Script Barriers”. My responsibilities in this project are to developed software for the collection of the raw corpus for Sindhi language and mapping chart for Sindhi Devanagari and Sindhi Arabic version.

### **4) Senior Research Fellow at Punjabi University Patiala**

**January 16, 2012 to September 21, 2013**

Worked as Senior Research Fellow at Advanced Centre for Technical Development of Punjabi Language, Literature and Culture, Punjabi University Patiala on Project “Punjabi text to speech help for people with cognitive disabilities”. My responsibilities in this project were to syllable marking in recorded Punjabi audio text and also developing interface for the same.

### **6) Industrial Placement at Alpha Net Technologies. Chandigarh (Degree course)**

**Jan 08 – Jun 08**

**Project Work:** I worked on a live full lifecycle project with the employees of the company to design & implement systems & applications to improve working practices & efficiency. The project work involved complete automation of Online Tutorial system using ASP.NET with C# as the main programming language.

### **7) Summer Trainings:**

- **RIMT Institute Of Engineering, Mandi Gobindgarh (RHCE)** **Jun 06 – Jul 06**
- **RIMT Institute Of Engineering, Mandi Gobindgarh, Punjab** **Jun 05 – Jul 05**

Industrial training designed to gain practical experience of designing & implementing applications in C++, HTML.

## **Other Projects**

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**Following are some of the other projects which I have made:**

### **1) Akhar Indic Word Processo ([www.akhariwp.com](http://www.akhariwp.com))**

**Project Work:** I have been part of **Akhar 2016** word processor development team as **Principal Technical Architech**. This software is the first Indic word processor for Punjabi (Gurmukhi), Hindi (Devnagari) and Urdu languages. Software was inaugurated in Sep 2016 by Punjabi chief Secretary Mr. Sarvesh Kaushal.

### **2) [www.exexams.in](http://www.exexams.in)**

**Project Work:** I have developed website which manages the database of old question papers of varies university. This site provides old question paper to the students free of cost. For this website, I have used PHP and MySQL with 3-tier architecture.

### **3) Unitype (Unicode Gurmukhi Typing pad with three Keyboard Mappings)**

**Project Work:** This software allow user to type Punjabi Gurmukhi in Unicode anywhere in windows. This software is made in c# .Net. Url: [www.exexams.in/ar/u.rar](http://www.exexams.in/ar/u.rar)

### **4) [www.osamohindracollege.org](http://www.osamohindracollege.org)**

**Project Work:** I have developed this website for old student association of Mohindra College Patiala. This website is made in HTML5, PHP, css and MySQL.

### **5) Type Test Checker (Depression count based)**

**Project Work:** I have also developed type test checking software. This software takes test document and reference text in txt format and counts the correct depressions. This software was used In March 2015 to check the 2346 (approximate) candidate type test conducted by Punjabi University Patiala to recruit the clerks.

### **6) Type Test Checker (Word per minute (WPM) based)**

**Project Work:** I have also developed type test checking software which used to test speed of the user in WPM (Word Per Minute). Also used this software to conduct typing test in Baba Farid University of Health Sciences, Faridkot and Maharaja Ranjit Singh Punjab Technical University, Bathinda. For this same I got the appreciation letter from the Dr. Raj Bahadur, Vice Chancellor of Baba Farid University of Health Sciences Faridkot.

### **7) Online centralized Admission Portal**

**Project Work:** I have also developed on the online centralized admission portal for the Punjabi University. This portal was used for the admission of the student to the entry level graduate courses affiliated to various Punjabi University colleges. My responsibilities in this project was college and course selection by students, compilation of colleges and their course with total number of seats sanctioned and various reports like total students admitted course wise, college wise, region wise, city wise and gender wise. For this same, I also got the appreciation letter from the officiating Vice Chancellor Mr. Anurag Verma (IAS).

#### **8) Online Bill Generation/Payment for Water Sewerage Utility Service**

**Project Work:** In this services, Water and Sewerage utility services bills are being generated. I have given my consultancy services to the CISIT Pvt. Ltd during July 2016 to October 2016. This solution was currently used by Gram Panchayat, Kheri Gujran., Patiala. Consumers can view and pay their bill online at [www.kherigujran.in](http://www.kherigujran.in).

#### **9) Web portal for management of Punjabi University research branch records**

**Url:** (<http://punjabiuniversity.ac.in/research>).

The portal provides computerized online record maintenance of PhD Scholars. The project was developed using PHP/HTML at the front end and MySQL at the backend. The portal is successfully being used by the administrative staff which has drastically improved the management and maintenance of records.

## **Skills & Achievements**

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### **Extra-Curricular Activities & Positions of Responsibility:**

- First Prize in Debugging and Programming & Second Prize in Web Designing in INTELLOASIS'06 Tech fest organized in college.
- Second Prize in WEB DEVELOPMENT at SATURNALIA-MMVI, An Inter University Festival held in Thapar Institute of Engineering & Technology, Patiala
- Developed Software for Punjabi Gurmukhi Unicode Typing (Advance Centre: UniType) with Remington, Phonetic and In-script keyboard mapping.

### **Computing:**

- Programming: C, C++, ASP.NET, SQL, PHP, C#.NET, Lightswitch.
- Databases: SQL Server, MS Access, MySQL.
- Experienced in Windows (98, 2000, XP, 7, 10) MS DOS, MS Word, MS Excel.

**Languages:** English, Punjabi, Hindi & Urdu.

## **Publications**

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- Ankur Rana, Gurpreet Singh Lehal, "Offline Urdu OCR using Ligature based Segmentation for Nastaliq Script". In Indian Journal of Science and Technology, Volume 8, Issue 35, December 2015, ISSN : 0974-5645, DOI: 10.17485/ijst/2015/v8i35/86807
- Rohit Kumar, Balwinder Singh, Ankur Rana. "Gurmukhi Script Recognition using Tesseract OCR Engine". In International Conference on Information and Mathematical Sciences, 24-26 October, 2013. ISBN - 9789351071624
- Ankur Rana. "Development of Language Model Based Optical Character Recognition System for Urdu Script", In second ICDAR Doctoral Consortium in association with ICDAR 2013 in Washington, DC, 25 August 2013
- Gurpreet Singh Lehal, Ankur Rana, "Recognition of Nastalique Urdu Ligatures" , In the Proceeding of workshop MOCR '13, August 24 2013, Washington, DC, USA. ISBN 978-1-4503-2114-3
- Deepali, Vishal Goyal, Ankur Rana. 2012. "Opinion Polarity Detection-A Survey". International Journal of Computational Linguistics and Natural Language Processing Vol 1 Issue 1 Aug 2012. ISSN - 2279-0756,pp 20-26
- Ankur Rana, Vishal Goyal, Vimal K. Soni. "Renaissance of Opinion Mining", *In the International International Conference on Information Systems for Indian Languages (ICISIL)*, March, 2011. Punjabi Univerity Patiala. Springer LNCS – 2011.

## **Interests**

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I have a keen interest in software development and listening to music. An adventurer at heart I love travelling to places and interacting & socialising with people from all walks of life. I also have a genuine interest in computing and I have attended seminars & presentations with a view to expanding on my knowledge.

Date : May 23, 2018