Abdul Fatir Ansari

Education

2013–2017 **Bachelor of Technology in Civil Engineering**, *IIT Roorkee*, India.
CGPA: 7.1/10

2010, 2012 **High School**, *St. Mary's School*, Najibabad, India.
- 12th: 93.75%
- 10th: 92.6%

Interests

• Bioinformatics • Computer Vision • Machine Learning • Image Processing

Internships

Apr.–Aug. '16 **Google Summer of Code** with *Computational Biology @ University of Nebraska-Lincoln*
- *Mobile Based Blood Analysis*: Developed a mobile application for image analysis to enable a user to take a picture of card with a blood sample and several reference points, and using pixel intensities of the samples, the application estimates a standard curve, which is then used to calculate the concentration of a given molecule in the blood sample.

May–Jul. '16 **MapMyIndia**, *New Delhi*, India
- *Privacy Protection in Street View Images*: Worked on automatic detection and blurring of faces and vehicle license plates. Written in C++ and Python using OpenCV. Obtained a recall of more than 90%. A quality assurance tool was subsequently developed which would allow users to fine tune the results of automatic detection.
- *Traffic Sign Recognition*: Worked on traffic sign recognition in Street View images using Convolutional Neural Networks. Written in Python using OpenCV and Keras. A CNN was trained using various traffic sign images like speed signs, stop signs, etc.

Dec. '15–Apr. '16 **Sanibridge, Inc.** *Omaha*, Nebraska, USA
- *Sanibridge Health App*: Worked as the main Android developer under the supervision of Dr. Tomas Helikar on the full stack development of an Android health application which lets the user track various health indicators such as Glucose, Cholesterol, Calories, *etc.* The server was written in PHP with MySQL. The application also lets users sync health data from popular devices' (Fitbit, Jawbone, *etc.*) cloud APIs.

735, Radhakrishnan Bhawan, IIT Roorkee – Roorkee – India
+91 (888) 166 1129 • *abdulfatirs@gmail.com*

Research & Projects

Sep.–Nov. '15 **Posture Recognition in HINE Videos**, *Dept. of Computer Science & Engineering*, IIT Roorkee.

HINE are tests conducted on infants to assess the possibility of a neurological disorder in them. We addressed the problem of posture recognition of the infant. OpenCV was used for data extraction from the videos. Hidden Markov Model was used for the classification of the postures.

Jan.–Apr. '16 **Exercise Classification and Event Segmentation in HINE Videos**, *Dept. of Computer Science & Engineering*, IIT Roorkee.

Exercise classification was done by extracting bag-of-words features from full-length videos of HINE tests. An HMM classifier was used. Event segmentation in videos was done using deviation in optical flow velocities of frames.

May–Jul. '15 **Vehicle Detection & Tracking**, *Dept. of Civil Engineering*, IIT Roorkee.

OpenCV was used for vehicle detection and estimation of traffic parameters in a video dataset.

Feb.–Apr. '15 **Analysis of Trusses & Frames**, *Dept. of Civil Engineering*, IIT Roorkee.

Programs to analyze determinate and indeterminate structures like beams, frames, and trusses, were developed in Python. An efficient beam section was also designed programmatically under the given loads and limiting conditions.

Conferences

2016 *Posture Recognition in HINE exercises*. **Ansari AF**, Roy PP, Dogra DP, Advances in Intelligent Systems and Computing, Vol. 460, Proceedings of International Conference on Computer Vision and Image Processing, CVIP 2016, Vol. 2. *In press.*

Publications

2016 *Exercise Classification and Event Segmentation in HINE videos*. **Ansari AF**, Roy PP, Dogra DP, Journal of Medical Systems. *Under review.*

Programming Skills

Expert Python, Java (including Android)

Well Acquainted MATLAB, C++, C#

HTML/CSS, PHP, SQL, LaTeX

References

Tomas Helikar **Assistant Professor**, *Dept. of Biochemistry*, University of Nebraska-Lincoln.
thelikar2@unl.edu

Partha Pratim Roy **Assistant Professor**, *Dept. of Computer Science & Engineering*, IIT Roorkee.
proy.fcs@iitr.ac.in

Rohan Verma **Executive Director & CTO**, *MapMyIndia*, New Delhi.
rohanv@mapmyindia.com

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