

Barkha Chauhan

Image processing engineer with 5 Years experience(2D & 3D Image processing using OpenCV, Python, C++, Data structures, Machine learning)

EXPERIENCE

Agiliad, Pune — Sr. Software Engineer

Sep 2018 - PRESENT

As a part of the ADAS team of **Medical domain**, worked on various kinds of Images like, 2D, 3D, DICOM, XRay, CT-Scan

Rutherford Technologies, Hyderabad — Software Engineer

June 2017 - Sep 2018

Worked on **Sports and Educational** vertical which includes various sports like football, basketball, running, lacrosse and table tennis.

Accenture, Bangalore — Associate Software Engineer

Nov 2015 - June 2017

Worked on retail vertical for **face detection** and **person tracking** in malls and commercial places.

PROJECTS

Bone and parts detection from CT-Scan(DICOM)

- Processing **X-ray images** in raw and dicom format.
- Performing **image segmentation** on that based on general feature descriptors using **OpenCV** library.
- Bone detection followed by their specific parts detection.

Mobile X-ray(3D-Image processing)

- Processing depth buffer received from depth camera(3D) stream.
- **Image segmentation**: Detection of patient chest region with the help of collimator light.
- Using **C++**, developed **win32 GUI** applications.
- Server Socket Programming and **Multithreading** for remote devices like Tablet.

OMR Sheet Processing and Report generation

- Created web-application using **Django** for OMR Sheet Reader
- Detecting right filled bubble in **OMR** sheet using **Image processing**
- Creating PDF report for the marks with all details and statistics.
- Deploying the Web application on **AWS server**

Sports Analytics - Video processing

- Processing sports videos(**running, football, lacrosse, table tennis.**)
- Tracking player or object like ball frame by frame using feature descriptors.
- Based on the parameters like object **position and speed** giving final score.
- Converting all Python scripts into **c++** for deploying on **AWS server**.

Face detection and extraction

- Detecting and extracting faces from a given set of images as input using **HAAR** cascade classifiers and maintaining into databases(CSV)
- Creating scripts in Python for use in **CCTV cameras**.
- Creating .dll in **C++** for performing various tasks.
- Creating GUI in **C#** for graphs like Gender/Footfalls etc.

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SKILLS

● **Languages**: C++, Python, Core Java

● **Image Processing**: OpenCV, object segmentation, Color channels (RGB, Grayscale, LAB, HSV), Tracking, Video processing, 2D & 3D image, DICOM.

● **OS**: Windows, Ubuntu(Linux)

● **Machine learning**: Linear Regression, Logistic regression, K-mean clustering etc.

● **Framework & Libraries**: Git, SVN, STL, OpenCV, Pandas, threads, Numpy, Matplotlib

EDUCATION

MDU, Rohtak — B.Tech in Computer Science Engg.

June 2011 - July 2015

Percentage - 69%

Govt. Girls Sr. Sec School, HBSE board — 12th

MONTH 2009 - March 2010

Non-Medical - 79%

ACHIEVEMENTS

- 2nd in Painting competition in college 2nd year
- 1st in English writing competition in High-school

LANGUAGES

Hindi, English