

AKSHAY RAJ DHAMIJA

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Education

- 2015-Present : Master of Science - Computer Science GPA: 4.0/4.0 (till date)
University of Colorado, Colorado Springs (UCCS)
Colorado, USA
- 2010-2012 : Master of Business Administration in Software Enterprise Management
Center for Development of Advanced Computing (C-DAC)
Guru Gobind Singh Indraprastha University
NOIDA, Uttar Pradesh, INDIA
- 2006-2010 : Bachelor of Technology in Biomedical Engineering
Alwar Institute of Engineering and Technology
Rajasthan Technical University
Kota, Rajasthan, INDIA

Work Experience

Research Assistant

September 2015 – Present

Vision and Security Technology Lab

Colorado Springs

Working on IARPA grant for Janus project, aimed towards recognizing faces in the wild, under the guidance of Dr. Terrance E. Boult. Focused on investigating attribute recognition from faces in both closed set and open set scenarios using SVM's and deep networks.

Project Consultant

November 2012 – August 2015

My Personal Health Records Express

Gurgaon, India

An exhilarating experience, that exposed me to the dynamics of startups and healthcare industry while juggling various responsibilities such as project management, product design, requirement gathering, product delivery and market analysis. Restructured and launched products for various major hospitals and diagnostic chains in India and US.

Projects

VR website using A-Frame

One week

Aimed towards experiencing basics of Virtual Reality and creating a personal virtual reality website using A-Frame. The website may be found at www.dhamija.me

Feature extraction & point cloud reconstruction – Satellite images

Ongoing

Under the guidance of Dr. Jonathan Ventura, this project aims at feature detection from satellite images as well as point cloud construction from multi-view satellite imagery using deep neural networks.

Android application for GRE aspirants*Two weeks*

The project was aimed at learning Android Application development and creating an application for GRE aspirants for practicing Reading Comprehensions. More than 2500 Downloads and 800 active users. [Play Store Link](#)

Robot object fetching*Three weeks*

The project was a part of the robotics course at UCCS, where a robot equipped with a camera and a raspberry pie was used to identify a predefined cylindrical object, approach it and grip. Four ultra-sonic sensors were also used in order to localize the robot. ROS was used in the above project.

Remote accessing microscope*One month*

The project involved accessing a microscope using micro controller circuit through a PC and viewing the output image on another PC via LAN.

Patient monitoring system*Four months*

The project involved developing a patient monitoring system with parameters of temperature and ECG waveform fed into a PC where processing was done in MATLAB. This project couldn't be completed but a few Heart Rate Variability (HRV) parameters (Heart rate, RR Interval, NN50 and SDNN) were successfully extracted from a pre-stored ECG signal.

LED control by speech recognition*Two weeks*

The project involved developing of user dependent speech recognition software in MATLAB. This software with the help of a small circuit connected to a PC helped in bringing an LED into on, off or blinking modes.

Low cost colorimeter*Two weeks*

The project includes developing of a low cost colorimeter which is capable of measuring concentration of different elements present in solutions like copper sulphate and potassium permanganate.

Implementing goods codification and production reporting system at FPSI*Two months*

The project involved a detailed study on the manufacturing and managerial process of Fair Plast and Synthetic Industries (FPSI) which is a plastic bag manufacturing company. After the study issues of goods codification and production reporting were addressed by developing goods codification techniques for raw materials, work in progress and finished goods along with a production reporting system to help streamline the management process.

Proposing facility layout plan for plastic bag-making industries working in the MSME segment*Two months*

The project involved studying different facility layout plans available along with type of constraints faced by Micro, Small and Medium Enterprises (MSME's) in India. Accordingly, the best suitable layout plan was suggested keeping in mind different machine dimensions, material flow processes, ergonomic standards for body clearance as well as any special requirements according to the industries need.

Upcoming Publications

What's hiding in my deep features?

Book chapter - Deep Learning in Biometrics By CRC/Taylor & Francis Press.

Authors: Ethan M. Rudd, Manuel Günther, Akshay R. Dhamija, Faris A. Kateb, and Terrance E. Boult

Unconstrained face detection & open-set recognition challenge

Organizing the above challenge in International Joint Conference on Biometrics (IJCB) 2017

Computer Skills

Languages: C, C++, Python, MATLAB

Elementary Knowledge: Java, Perl, Mongo, C#

Tools: Caffe, OpenCv, NumPy, Scipy, SkLearn, SQL

Industrial Trainings

| Organization | Details | Duration |
|--|---|-----------------------|
| Fair Plast and Synthetic Industries (FPSI) | Studying the organizations manufacturing process and Implementing Goods codification and production reporting system. | June 2011 - July 2011 |
| INFOSYS campus connect | Life skills program | Feb 2009 - March 2009 |
| Appin technologies | Embedded systems | June 2009 - July 2009 |
| I.T.I.E. Bangalore | Biomedical Signal Processing, Image Processing, Digital Signal Processing | Feb 2010 - March 2010 |
| Dr. LalPath Labs | Pathological instruments | June 2010 - July 2010 |

Other Distinctions

- 1st Prize winner in a team quiz at A.I.E.T. Biomedical Dept. 2009.
- Awarded the Best Student Award in Biomedical Signal Processing workshop organized by CardeaLabs.
- Participated in paper presentation at Institute of Engineering and Technology in January 2007.
- Member of innovation council at MphRx.