

Pranav Garg

Curriculum Vitae

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A straight shooting go-getter with an unquenchable thirst for knowledge
and a large appetite for hard work

Education:

B.E. (Hons.) Electrical and Electronics Engineering
(Aug 2015 - Present)

ID Number: 2015A3PS0295G, 6th Semester Student
Birla Institute of Technology and Sciences, Pilani K.K. Birla Goa Campus

Grade XII, CBSE Board

All India Secondary School Certificate Examination
(April 2014 - March 2015)

Delhi Public School, Jodhpur
Graduated with a score of (462/500) 92.4% in 5 subjects
Computer Science with C++ Programming (98/100)

Grade X, CBSE Board

All India Secondary School Examination
(April 2012 - March 2013)

Delhi Public School, Jodhpur
Graduated with a CGPA of 10 (out of 10) in 5 subjects

Technical Knowledge:

- Machine Learning
- Deep Learning
- Computer Vision
- Natural Language Processing
- Reinforcement Learning
- Theoretical Neuroscience
- Programming Skills:
 - C++ Programming
 - C Programming
 - Python Programming and Scripting
 - Numpy

- Pandas
 - Pytorch
 - OpenCV
- MATLAB (Intermediate Level)
- Shell Scripting (Basic Level)
- Git (Basic Level)
- Parallel Programming using CUDA architecture
- Signal Processing
- Image Processing
- Digital circuit Designing
- Hands on experience with SOC, Development and Prototyping Boards
- Basic Networking skills (I attended an excellent workshop on networking named Nettech)

Courses (selected few related to field of interest):

Ongoing:

- On campus Courses:
 - Data Structures and Algorithms
- Online Courses:
 - Deep NLP (Oxford)
 - Reinforcement learning by David Silver (Deepmind)
 - Deep Learning Specialization by Andrew NG

Completed:

- On campus Courses:
 - Digital Design
 - Computer Programming
 - Signals and Systems
 - Control Systems
 - Microprocessors and Interfacing
 - Theoretical Neuroscience
 - Discrete Mathematics
 - Machine Learning
 - Neural Networks
- Online Courses
 - Machine Learning by Andrew Ng (Coursera)
 - CS 229 - Machine Learning (Stanford)
 - CS 231n - Convolutional Neural Networks for Visual Recognition (Stanford)
 - Introduction to Parallel Programming with CUDA (Udacity)
 - Probability and Statistics (Stanford Lagunita)
 - Applied Data Science with Python (Coursera)

Projects:

Current Projects:

- **Denoising Gravitational Waves using Supervised and unsupervised learning:** Research Project with Professor Kinjal Banerjee and Rhett Dsouza using GANs and CNNs
- **Portable Holter Monitor with Real time Threat Detection using Nvidia Jetson TX2:** A portable ECG Machine that will be able to predict heart problems in Real Time

Past Projects:

- **Detection of Windmills from satellite Images using Deep Neural Networks:** A project at Remote Regional Sensing centre west, Indian Space Research Organization. End to end application and training of Faster RCNN algorithm for object detection on satellite data.
- **A Study on applications of Neural Networks in Computer vision:** A study Project under Professor Bijil Prakash from BITS Pilani KK Birla Goa Campus.
- **Analysing and modeling Electroencephalogram data from Brain Computer Interface using Recurrent Neural Networks:** Working on EEG data from BCI for Alzheimer's Disease.
- **Denoising Images using Convolutional-Deconvolutional Network:** <https://github.com/pgtgrrly/Convolution-Deconvolution-Network-Pytorch> for Neural Networks And Fuzzy Logic Course in BITS Pilani
- **OCR on Devanagari Script:** For Machine Learning Course in BITS
- **Image Segmentation on Spacenet dataset:** For Proof of Concept for GAIL Project with Dr Neena Goveas

Affiliations:

Current Affiliations:

President and Founder, Society for Artificial Intelligence and Deep Learning (From August 2017):

The President and founder of the at-infancy community of Ai enthusiasts, who will be able to collaborate on different projects, mentor each other and help expand the knowledge base of each other. More Details on saidl.in

Vice President, IEEE Student Branch, BITS Goa (From April 2017):

I am the Vice President of the Student Branch of IEEE in BITS Goa, our aim is to develop the technical culture on campus and holding talks, workshops and conferences.

**Electronics and HPC Co-ordinator, Sandbox Committee, BITS Goa
(From February 2017):**

I am the Electronics Co-ordinator and member of the official seven student committee in-charge of the managing the FabLab (Fabrication Laboratory) in BITS Goa.

Kosambi Team, BITS Goa (From December 2017): I am part of the team which maintains and monitors the HPC Machine Kosambi in BITS Goa

Student Partner, Microsoft (From August 2017)

Past Affiliations:

**Research Intern, Remote Regional Sensing Centre, Indian Space
Research Organization (From May 2017 – July 2017):**

I worked on end to end training implementation of Faster CNN Algorithm for Detection of Windmills in satellite data. From the creation of dataset to training and deploying the model

**Mentor, Electronics and Robotics club (From November 2015 – August
2017):**

An active member and mentor to newly inducted members.

Content Developer, Project Mudra (December 2015 - April 2016): I was involved in the content writing and marketing team of Project Mudra (<http://www.projectmudra.com/>). They mentored me through the usage of Development Boards and Product creation

Non Academic Interests and Hobbies:

- Public Speaking (I took a course in Effective Public Speaking in my third semester and it is something which turned into a passion of mine)
- Blogging: I write a blog with technical posts and science fiction (thesilentmonksretreat.wordpress.com)
- Reading Self Development Books
- Animal Welfare.
- Story and Content Writing: I love writing thoughtful scientific articles, here are the links to a few of them:
 - <http://plutoniumgenesis.tumblr.com/post/131491531333/strings-of-destiny>

- <http://plutoniumgenesis.tumblr.com/post/137351115093/they-c-all-me-superman>
- <http://plutoniumgenesis.tumblr.com/post/131604872363/flutter-f-lutter-marty-back-to-the-future>

Contact Information:

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References:

1. Dr. Neena Goveas

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Associate Dean, ARC
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2. Mr Bijil Prakash

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