

# Pronoy Barua

<http://pronoy-barua.github.io/>  
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## EDUCATION

### **BITS PILANI, GOA CAMPUS**

#### **M.ENG IN COMPUTER SCIENCE**

Grad. Aug 2018 | Goa, India

Cum. GPA: 8.095 / 10.0

### **IMS ENGINEERING COLLEGE**

#### **B.TECH IN COMPUTER SCIENCE**

Grad. Jun 2015 | Uttar Pradesh, India

Cum. GPA: 64.1%

### **SOMERVILLE SCHOOL**

#### **XII (SCIENCE) - CBSE | 68.6%**

Grad. May 2010 | Noida, India

#### **X - CBSE | 83.8%**

Grad. May 2008 | Noida, India

## LINKS

Github:// [pronoy-barua](https://github.com/pronoy-barua)

LinkedIn:// [pronoybarua](https://www.linkedin.com/in/pronoybarua)

Twitter:// [@pronoy\\_93](https://twitter.com/pronoy_93)

## COURSEWORK

### **GRADUATE**

Distributed Data Systems

Parallel Computing

Cloud Computing

Advanced Data Mining

Real Time Systems

### **UNDERGRADUATE**

Operating Systems

Computer Networks

Digital Image Processing

Machine Learning

Database Systems

## SKILLS

### **PROGRAMMING**

Over 2000 lines:

C++ • Python • JavaScript • Shell

MATLAB •  $\text{\LaTeX}$

Familiar:

MongoDB • Django • MySQL • Node.js

OpenCV • OpenCL • scikit-learn

Tools:

Docker • Vagrant • Ansible • git

jQuery • RabbitMQ • D3.js

## EXPERIENCE

### **QUALCOMM | SOFTWARE ENGINEER**

Jul 2018 - Present | Hyderabad, India

- Build video firmware for HEVC and VP9 decoders.

### **QUALCOMM | SOFTWARE ENGINEERING INTERN**

Jan 2018 - Jun 2018 | Hyderabad, India

- Built a solution to detect camera tampering for surveillance cameras. Learned about parallel programming in OpenCL.
- Optimized Image Quality Post Processing Tool for multi-core machines.
- Researched ways to detect compression artifacts in videos. Developed prototypes of various solutions.

### **BITS PILANI | SOFTWARE ENGINEER (WEB)**

Jan 2017 - Apr 2017 | Goa, India

- Developed the front-end and back-end for the new SWD (Student Welfare Division) website for college.
- Maintained the old SWD website.

### **XTAGE TECHNOLOGIES | SOFTWARE ENGINEERING INTERN**

Jun 2015 - Jul 2015 | Noida, India

- Built a system to rank brands based on the occurrence of their logos in social media images. Responsible for research and prototyping. Explored computer vision algorithms for object detection.
- Developed the front-end and back-end for data collection and report generation for Oxfam, India, an international NGO.

## PROJECTS

### **EXTRACTION OF SELECTED TEXT FROM SCANNED DOCUMENTS**

Sep 2014 - Mar 2015 | IMS Eng. College

Designed a system to perform OCR on selected regions of image. Learned about various digital image processing and machine learning techniques.

### **BATCH JOB EXECUTOR**

Oct 2016 | BITS Pilani, Goa Campus

Designed a batch job executor in C which executed commands from a file sequentially. The goal of the project was to improve understanding of processes. Added support for pipes and redirection.

### **DISTRIBUTED CLUSTERING ALGORITHM**

Feb 2017 - Apr 2017 | BITS Pilani, Goa Campus

Implemented a parallel version of the k-means clustering algorithm. Theoretical and empirical analysis of the algorithm was conducted.

## AWARDS

2015 5th Project presentation at inaugural ACM chapter, IMSEC

2012 1st Technical presentation on HTML5, IMSEC

## EXTRA CURRICULAR ACTIVITIES

2010 Runner-up District Level Junior Football Championship

2009 2nd Inter-School Western Music Competition - Lead Pianist/Keyboardist