ADITYA SARMA
MALE, 20 YEARS
B.E. (Hons.) Computer Science (2013-2017)
Birla Institute of Technology and Science Pilani
CGPA: 7.96

EDUCATION

BE (Hons.) Computer Science	2017	BITS Pilani	7.96/10	
BIEAP	2013	Vijaya Ratna Junior College.	97.4%	**100% in Math and Physics in both years.Stood first in my college.**
BSEAP	2011	St. Mary's High School.	89.3%	**100% in Science.**

COURSES UNDERTAKEN

Linear Algebra, Differential Equations, Computer Programming, Electrical Sciences, Logic in Computer Science, Digital Circuits and Design, Object Oriented Programming, Discrete Mathematics, Data Structures and Algorithms, Database Systems, Microprocessor Programming, Computer Architecture, Theory of Computation, Operating Systems, Design and Analysis of Algorithms, Computer Networks, Compilers, Data Mining, Artificial Intelligence, Image Processing, Parallel Computing, Number Theory

EXPERIENCE
1. TEACHING ASSISTANT(CS F415), BITS PILANI   AUG 2016 - PRESENT
  ➢ Teaching Assistant for the course DATA MINING.
  ➢ Involved in conducting laboratory sessions, preparing lab sheets and assignment questions.
1. TEACHING ASSISTANT(CS F301), BITS PILANI   AUG 2016 - PRESENT
  ➢ Teaching Assistant for the course PRINCIPLES OF PROGRAMMING LANGUAGES.
  ➢ Involved in assisting the instructor during tutorials, preparing assignment questions etc.
3. INTERN, BOOMERANG COMMERCE   MAY 2015 - JUL 2015
  ➢ Boomerang Commerce is a Startup that gives dynamic price optimization solutions to e-commerce retailers.
  ➢ Built a web application to handle the user accounts of the employees in third party websites like Unfuddle, AWS and Atlassian Jira.
  ➢ My work included automating the user creation process as well as creating a single portal where account details of any employee could be monitored in all accounts.
  ➢ Used Dropwizard to create a RESTful backend and AngularJS for making a responsive SPA.
4. RESEARCH INTERN, MACHINE VISION LAB, CSIR-CEERI   APR 2015 - JUL 2015
  ➢ Worked under the guidance of Dr. Jagdish Lal Raheja, Sr. Principal Scientist, CSIR-CEERI.
  ➢ Worked on Activity Recognition with Emphasis on Fall from a normal camera feed.
  ➢ Classified actions like Moving, Lying, Standing and Fall
  ➢ Used SVM for classification.

ACADEMIC PROJECTS
  ➢ **PROJECT FOOD SENSE (Dr. Lavika Goel, Asst. Prof)   AUG 2016 - PRESENT**
    ○ Working on classifying food items into classes according to their age and also predict if they are rotten or not
    ○ Completed the literature survey, made a template algorithm. Currently working on the dataset.

  ➢ **PARALLEL DBSCAN (Dr. Poonam Goyal, Assoc. Prof)   AUG 2016 - PRESENT**
    ○ Currently doing a literature survey on the different approaches to parallelizing DBSCAN

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- Plan to come up with a design for a parallel DBSCAN algorithm that would scale.
- ➤ **AUTOMATED QUESTION ANSWERING SYSTEM**   **SEP 2015 - DEC 2015**
  - Made an Automated Question Answering System as part of a course project.
  - Used Google API for Python to query google and get webpages as results.
  - Applied Natural Language Processing to extract answer from the text.
  - Used the concept of n-grams and levenshtein distance for similarity comparison.
- ➤ **COMPILER CONSTRUCTION**   **MAR 2016 - MAY 2016**
  - Coded a fully functional compiler for a toy language.
  - Implemented Lexer, Parser, Semantic Analyzer, Intermediate Code Generator and Code Generator modules in C
- ➤ **PARALLEL FILE SYSTEM COMPARISON**   **JAN 2016 - FEB 2016**
  - Built a program when given the input k filesystems in the corresponding tree representations,
  - Prints out if all the filesystems are exact copies or a majority of them have a common subtree or none of the above.
  - Made two versions one using Pthreads and the other using OpenMP. All coding was done in C++.
- ➤ **PARALLEL BACKTRACKING FRAMEWORK**   **MAR 2016 - MAY 2016**
  - Implemented a framework to solve problems that can be solved by backtracking.
  - Specific solver specific to problem has to be provided by the user.
  - Framework takes solver function as input and parallelizes using fixed number of nodes in a cluster - given by user.
  - Hybrid model Shared Memory + Message Passing

ACHIEVEMENTS
- ➤ Received Proficiency Prize for overall good performance in School for **five consecutive years** from 6th to 10th standard.
- ➤ Topped my College scoring 98.2 % in 11th standard. Also came in the **top one percentile** students in Andhra Pradesh(then).
- ➤ Passed the Australian National Chemistry Quiz(ANCQ) with **high distinction**, conducted by The Royal Australian Chemical Institute (RACI).

POSITIONS OF RESPONSIBILITY
- ➤ Undergraduate Teaching Assistant, Data Mining
- ➤ Undergraduate Teaching Assistant, Principles of Programming Languages
- ➤ **Project Lead, Gyanbodh,** An initiative which provides evening tuitions to kids, undertaken by the Pilani Chapter of **Nirmaan Organisation** (a non-profit Organisation started by the students of BITS-Pilani).
- ➤ **Head Boy** of my school in 10th grade. Actively participated in School Parliament where discussions used to happen regarding decisions to be taken.

EXTRA CURRICULAR ACTIVITIES
- ➤ Member, Computer Science Association, BITS Pilani.
- ➤ Member, Faculty Student Council, BITS Pilani.
- ➤ Volunteer, Nirmaan Organisation.
- ➤ NCC Cadet for 2 years, Received 'A' level Certificate.

TECHNICAL PROFICIENCY & INTERESTS
- ➤ **Programming Skills:** C(very proficient), C++, C#, JAVA(very proficient),Python(proficient), MATLAB(proficient), Octave, Shell Scripting, Bash, Databases(Oracle SQL), Prolog, Verilog.
- ➤ **Libraries:** OpenCV, Aforge.NET, EmguCV(Wrapper of OpenCV for C#), NLTK, OpenMP, OpenMPI, Dropwizard, AngularJS, Bootstrap, JavaScript, MySQL.
- ➤ **Major Interests:** Data Mining, Machine Learning, Algorithm Analysis, Theoretical Computer Science, Artificial Intelligence, Parallel Computing.