ANURAG GHOSH

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EDUCATION

International Institute of Information Technology, Hyderabad *Aug 2013 - Present*
B.Tech and MS by Research in Computer Science and Engineering GPA: 9.05/10
Adviser: Dr. CV Jawahar, Centre for Visual Information Technology (CVIT)

DAV Public School - Kota *April 2011 - April 2013*
High School Certificate Examination Percentage - 92%

EXPERIENCE

Research Student, IIIT Hyderabad May 2015 - Present

Undergraduate Honors Student working under Dr. CV Jawahar in Computer Vision and Machine Learning.

Teaching Assistant, IIIT Hyderabad Aug 2015 - Dec 2015

IMA101 - Introduction to Discrete Mathematics

Software Developer (Google Summer of Code), Boost C++ Libraries May 2015 - Aug 2015

Initiated Boost Document Library mentored by Anthony Polukhin.

RESEARCH PROJECTS

Dynamic Story Generation Aug 2015 - Present
under Dr. CV Jawahar *CVIT*

- The Honors Project involves dynamic generation of relevant stories for a tourist visiting a tourist place using location and visual cues.
- We employ appropriate heuristics to predict the path of the tourist from cues and retrieve relevant summaries to be spoken by Text to Speech system in synchronization to the path being traversed.

Trust Based Recommender System for TED Oct 2015 - Jan 2016
under Prof. Navjyoti Singh *Centre for Exact Humanities (CEH)*

- Constructed a network graph based on tags of TED Talks, showed that it is a small world network and scale free, and detected communities through modularity optimization.
- The results are then augmented by interaction based user-user trust ratings for the personalized recommendation setting. (Currently under review at TempWeb 2016)

Automated Essay Grading Sep 2015 - Dec 2015
under Dr. Avinash Sharma *CVIT*

- Extracted numerous statistical features from a dataset of essays to find a generalized essay grader which closely matches human graders.
- Performed feature engineering after a review of relevant papers and employed a variant of Spectral Graph Diffusion which uses Heat Matrices.[Horaud'10]

Blur Detection and Discrimination in Images Oct 2015 - Dec 2015
under Dr. Vineet Gandhi *CVIT*

- Explored various ways to detect Blur and distinguish between blurred and unblurred Regions in an image.
- Implemented methods like using Wavelet Transform to detect Blur [Tong'04] and to build a feature set to discriminate blur regions from unblurred regions. [Shi'14].

TECHNICAL PROJECTS

Boost Document Library May 2015 - Present
mentored by Anthony Polukhin

- Worked on a Document library which helps in automation of various tasks related to Excel/LibreOffice documents in C++.
- The library is cross platform and wraps part of Excel and Libreoffice API in a clean interface, providing core functionality to manipulate documents, sheets and cells by exporting, editing and iterating etc.

Scene Text Translation Application May 2015 - Jun 2015
under Dr. CV Jawahar *CVIT and MIT Kumbhathon*

- Developed an android application which translates indigenous sign boards to other Indian Languages for participants of Nashik Kumbha Mela (2015), India.
- A client server model was implemented which identified the sign board and corresponding translation using a Nearest Neighbor and Bag of Words pipeline.

Processor Simulator and Assembler Oct 2014 - Present
under Dr. Madhava Krishna

- Worked on a teaching tool to write a Clock Cycle and Instruction Level simulator of a simple processor design.
- We also contributed by helping **expand the course material** on Microprogram Sequencers for Digital Logic and Processors (IEC101).

Cluster-Based Data Oriented Hashing Nov 2015 - Dec 2015
under Dr. PK Reddy *Centre for Data Engineering (CDE)*

- Worked on an indexing and fuzzy search system that can be used to store very large numeric data tables. We tested our implementation on GIST dataset.
- A two level indexing method was implemented where we first form clusters using the k-means algorithm and then hashed these clusters using a PCA-Hashing scheme [Chafik'15].

PROGRAMMING SKILLS

Languages	C++, C, Python, MATLAB, Javascript, Bash
Web	HTML, Javascript, CSS, Django, Celery
Vision & ML	OpenCV, OpenGL, Scikit-learn
Other	Android, SQL, Gephi, NetworkX

ACHIEVEMENTS

- ⋆ Awarded Dean's Merit List (top 10% of the batch) for Exemplary Academics for 3 consecutive Semesters
- ⋆ Systems Administrator of CVIT-HPC cluster operating on SGE/SLURM (2016-)
- ⋆ Runner Up, Code.Fun.Do Hackathon organized by Microsoft India Developement Centre
- ⋆ Member, Student Welcoming Body (2015-2017)
- ⋆ Member, IIIT Students Parliament (2013-2014)
- ⋆ Secured Rank 5137 out of 1.4 million candidates in JEE Main 2013
- ⋆ Secured Rank 8350 out of 150,000 qualified candidates in JEE Advanced 2013

January 2016