Pidaparthi Lakshmi Aparna

Personal Data

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Education

2014-18	**Undergraduation** 3rd year, B.Tech in **Information Technology** at **NITK, Surathkal, INDIA** CGPA: 9.54/10 upto IVth semester
2013-14	**AISSCE** Kendriya Vidyalaya No.1, Panambur, Mangalore, INDIA Board: Central Board of Secondary Education PERCENTAGE: 96%
2011-12	**AISSE** Kendriya Vidyalaya No.1, Panambur, Mangalore, INDIA Board: Central Board of Secondary Education CGPA: 10/10

Internships

MAY-JUL'16	**Research Intern at Dept. of Avionics, Indian Institute of Space Science & Technology, Thiruvanatapuram, INDIA** Implemented a variation of Non-Local Means filter in MATLAB by incorporating maximum likelihood based weights to Discontinuity Adaptive framework to denoise Synthetic Aperture Radar(SAR) images and holographic interferometry data. De-noising holographic interferometry data helps in better phase estimation and 3D extraction.

Academic Projects

AUG-NOV'16	**Search Engine Vector Voting (SVV)** A meta-search engine developed with Python, HTML, PHP, JavaScript to get search results from 4 search engines using BeautifulSoup for a given query and display the results to the user along with their relevance and vote distribution across the search engines.
AUG-NOV'16	**On the fly document clustering (OTFDC)** An extension to SVV which improves the clustering performance of search engines by displaying results of semantically related queries to the input query.
AUG-NOV'16	**Procurement tracking system** An application to track status of a procurement by a user group. Database was created with MySQL and normalized upto 3NF. Front-end was designed using HTML, CSS, JavaScript, PHP.
AUG-NOV'16	**Parallelizing image processing algorithms** Parallelized Otsu's segmentation algorithm, Sobel's edge detection algorithm and Gaussian blurring in Python using PyMP. Compared speedup achieved after parallelizing in C (using OpenMP) and Python (using PyMP).
JAN-APR'16	**Automatic image annotation** Application developed with OpenCV's Python interface and PyQt for GUI to annotate images input by user. The input monument-image is compared with SIFT algorithm with various images of monuments in the database to identify the monument input by user.

JAN-APR'16	**Image Search** An application developed in Python with OpenCV's Python interface to search from the database and display similar images to the one input by user. SIFT key point matching algorithm was used for similarity detection between images.
JAN-APR'16	**Implementation of Longest Path problem on permutation graphs** Implemented the algorithm suggested in the paper "The Longest Path Problem on Permutation Graphs" by Ruei-Yuan Chang et. al. to find the longest path on permutation graph, an NP-Complete problem for general graphs in C++ as part of a project in Design and Analysis of Algorithms.
AUG-NOV'15	**Hotel Booking management System** A Java-based GUI application for allowing a user to make, view, delete, modify his booking. Java Files were used as backend. All major OO concepts were implemented. Used Netbeans for IDE.

All project codes available on https://github.com/lapa19.

SKILLS

Languages:	C, C++, Java, Python, MATLAB, BASH shell scripting, HTML, CSS, JavaScript, PHP, SQL
Tools/Frameworks/Libraries:	LaTeX, STL, OpenCV, Android Studio, OpenMP, R, Netbeans, Wireshark, PyMP, MySQL

RELEVANT COURSES

2016-Present	Parallel computing, Database systems, Automata and compiler design, Web technologies and applications, Time series analysis, Semantic web technologies
2015-16	Data Structures and algorithms, Paradigms of Programming(Java), Unix programming, Graph theory and probability, Design and analysis of algorithms, Operating systems, Computer communication and networking, Information systems, Object oriented analysis and design
2014-15	C Programming

ACHIEVEMENTS

2016	Led a team of 4 undergraduates for **Code.fun.do**, a week long hackathon conducted by **Microsoft** and developed an Android app for child birth registration in India using Micrsoft Azure for backend which went on to secure the 2nd place in college.
2015	Secured rank 162 out of 1069 teams across the world in Women's Cup (Coding competition) organized by **HackerRank** in October 2015, was awarded a T-shirt for the same.
2015	Secured branch position 1 out of 103 students at the end of I^{st} year in college.
2014	Secured **96%** in AISSCE-2014, was awarded merit certificate and cash prize by Kendriya Vidyalaya Sangathan(KVS) for being in top 1.5% of all Kendriya Vidyalayas across India.
2014	Was in top 0.5% of the country in both IIT-JEE and JEE-Mains, the entrance exams to some of the prestigious colleges in India.
2012	Secured **10/10** CGPA in AISSE-2012, was awarded merit certificate and cash prize by KVS.

EXTRA-CURRICULAR

- Member of Comps Committee at Engineer'16, the annual tech-fest at NITK as one of the problem setters for Inscription'16, an online programming contest.
- Executive member at Web Enthusiasts' Club at NITK. WebClub is actively involved in holding talks, discussions, workshops and coding contests over the past few years.
- Participated in ACM-ICPC Asia Amritapuri and Kolkata regional sites' First Round in 2015.
- Actively participated in many school-level painting, singing and debate competitions.

HOBBIES

Competitive coding, Carnatic Music, Novel reading