

HARSH MAHENDRA MARU

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EDUCATION

National Institute of Technology Karnataka, Surathkal *July 2017 - Present*
Bachelor of Technology in Information Technology, Junior Year *CGPA: 7.3*

TECHNICAL STRENGTHS & INTERESTS

Computer Languages	C/C++, Python, Java, Bash, HTML, CSS
Libraries	TensorFlow, Keras, Scikit-Learn, PyTorch, Numpy, Pandas
Interests	Cloud Computing, Computer Vision, Algorithms

WORK EXPERIENCE

SAP Labs India *Summer 2020*
• Software Development Intern working in Cloud Team.

RESEARCH EXPERIENCE

Retinal OCT Fluid Detection and Segmentation *Ongoing*
Undergraduate Research Assistant, Supervisor: Prof Jeny Rajan

- Analysis and Comparison of various Medical Image Segmentation techniques & efficient CNN architectures such as DeepLabV3, VGG16 architecture.

Analysis of "Implementation and evaluation of LTP in ns-3" *Summer 2019*
Undergraduate Research Assistant, Supervisor: Prof Mohit P. Tahiliani

- Recreation of the graphs mentioned in the research paper "Implementation and evaluation of LTP in ns-3" to analyse the current implementation of LTP and its compatibility with latest ns-3 releases.

SIGNIFICANT PROJECTS

Distributed Steganography using Genetic Algorithm for wireless network applications
2019

Language :Python3

- Genetic Algorithm was implemented to the prevent detection of steganography and visual cryptography in a given image file.
- Reduced Time complexity by 30% by implementation of local optimal match instead of global optimal match rendering the implementation useful for larger images and data .
- Research Paper accepted and published in SPRINGER Advances in Intelligent Systems and Computing (AISC) .

Remote Image Analysis *2018*

Language :Python3

- Implemented data structures Quad Trees & Merkle Trees together to store satellite images or remote images. Implemented SHA-256 to compare and find any differences between two satellite images of the same area or location and highlight the differences.
- Applications include identification of illegal constructions and deforestation , military applications.

- Implemented a Web Crawler and Indexer using BASH that can give the number of times different words are repeated on a given url and all urls mentioned on the given url. Used by editors to find repetition of words as repetition weakens body of writing, used to build celebrity rankings & check authenticity of Wikipedia articles.

RELEVANT COURSES

Core Courses

Data Structures & Algorithms
Design and Analysis of Algorithms
Computer Networks
Operating Systems
Computer Graphics
Unix Programming
Paradigms of Programming

Other Courses(MOOCs)

Computer Vision(Stanford CS231N)
Machine Learning(Stanford CS229)
Probability Theory & Statistics
Linear Algebra and Matrices

ACADEMIC ACHIEVEMENTS

- Scholarship awarded by Linux Foundation to attend Open Networking Summit Europe 2019 in Antwerp, Belgium.
- 95.93 percentile all over India in Critical Thinking in a survey taken by Stanford Research .
- 98.1 percentile in IIT-JEE Mains 2017(1.5 Million candidates).
- 95.85 percentile in IIT-JEE Advance 2017.

EXTRA-CURRICULAR

- IEEE Student Member.
- KREC Student Mentorship Programme - Taught Computer Science to school students once a week.
- Technites 2018 Executive Member.