Shibin George

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EDUCATION

UMASS AMHERST
Amherst, MA
M.S. IN COMPUTER SCIENCE
Sep, 2019 - Dec, 2020 (Expected)

NIT WARANGAL
Warangal, India
B.TECH IN COMPUTER SCIENCE
August, 2011 - April, 2015
GPA: 8.48 / 10.0

COURSEWORK

GRADUATE
Information Retrieval
Natural Language Processing
Neural Networks

UNDERGRADUATE
Operating Systems + Practicum
Distributed Computing

SKILLS

PROGRAMMING
Over 5000 lines:
Java • C • C++ • Shell • Python
Over 1000 lines:
Matlab • Javascript

PUBLICATIONS

[1] Content Based Image Retrieval on Hadoop Framework. IEEE International Congress on Big Data, 2015.
`http://dx.doi.org/10.1109/ BigDataCongress.2015.103.`

[2] Weighted finite automata based on local patterns for image authentication. IEEE International Conference on Semantic Computing, 2015.
`http://dx.doi.org/10.1109/ ICOSC.2015.7050797.`

EXPERIENCE

QUALCOMM | SENIOR SOFTWARE ENGINEER
Jun 2015 - July 2019 | Hyderabad, India
- Contributed bug-fixes to the Android Open Source Project, the official repository that hosts the Android OS. Take a look at my contributions **here**.
- Designed and implemented Over-The-Air (OTA) upgrade solutions for Linux Android platform. I was awarded a **Super Qualstar** (highest recognition for individual-contribution within Qualcomm) for my work on A/B OTA upgrade solution.
- Developing/maintaining **tools** that facilitate debugging (of memory (heap)-leaks and heap-corruptions)

QUALCOMM | SOFTWARE ENGINEERING INTERN
May 2014 - July 2014 | Hyderabad, India

- Worked on an optimization designed for the Android composition engine (SurfaceFlinger) and built a prototype for the same.

PROJECTS

CBIR USING LOCAL-TETRA PATTERNS ON HADOOP MAPREDUCE FRAMEWORK
Content-based Image retrieval (CBIR) involves extracting features (Local Tetra Patterns in this case) from every image in a dataset and then retrieving images from the dataset that is closest to a user-specified query-image. There were 3 stages involved: taking a huge dataset of images and converting them to MapReduce's native SequenceFile type (**github-stage-1**), extracting image features from SequenceFiles and storing the features on Hadoop's Distributed FileSystem (**github-stage-2**), and then fetching the results to a user-specified query(**github-stage-3**). Also wrote a **image-viewer GUI** using Swing to view the results from a CBIR query. See [1] in Publications.

WEIGHTED FINITE AUTOMATA ENCODING OF IMAGES
The idea was to explore how feature extraction from an image can be done using Weighted finite automata (WFA) encoding of the same image. WFA encoding is a technique primarily meant for image compression but my focus was on exploring its applicability on tamper-detection in images. See [2] in Publications.

SAVE THE SESSION
Save The Session is a Chrome extension for saving user sessions and reloading them later. It has about 4000 active users - **Github**

AWARDS

Year	Rank	Award
2014	top 52/2500	KPCB Engineering Fellow
2014	1st/50	Microsoft Coding Competition, Cornell
2013	National	Jump Trading Challenge Finalist
2013	7th/120	CS 3410 Cache Race Bot Tournament
2012	2nd/150	CS 3110 Biannual Intra-Class Bot Tournament
2011	National	Indian National Mathematics Olympiad (INMO) Finalist