MAHESH BHOSALE

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EDUCATION

Master of Science, 05/2023
University at Buffalo, The State University of New York
- Doing Master's Thesis: Cross-modal Image Registration.

Bachelor of Technology, 05/2017
Walchand college of engine engineering
- Conferred Honorable mention ACM ICPC 2015 Regionals, Amritapuri.
- Bestowed Runner-Up Best project award 2014 for Twitter Sentiment Analysis, WCE Sangli.
- Awarded First Runner-Up at Mindspark 2014, College of Engineering Pune (A national level coding challenge 700 participants) and Bleed-code Hacker-Earth programming challenge.

TECHNICAL SKILLS
- Languages: Python, C++, C, Java, Shell scripting, R (Novice).
- Libraries and DBs: PyTorch, Scikit-learn, NumPy, Pandas, MatPlotlib, TensorFlow, MySQL.
- Tools and Database: VScode, Pycharm, Jupyter, System-tap, crash (core dump analysis), gdb, AWS.

EXPERIENCE

Graduate Teaching Assistant, University at Buffalo, Buffalo, NY, 02/2022 – Present
- Assisted students in CSE 702 Automated Analysis of Sporting Event Videos projects under guidance of Dr. David Doermann. Reviewed and presented papers on Muti-athlete tracking, re-identification, and highlight generation to class.
- Assisted Dr. Farshad Ghanei to guide students of CSE 4/521 Operating systems in programming of Unix-based OS - Pintos. Conducted weekly office hours to solve doubts and record progress.

Software Engineer, Veritas Technologies LLC, Pune, India, 07/2017 – 06/2021
- Developed a novel algorithm for predictive execution of resource-intensive tasks. Demonstrated a paper at Veritas's annual technical conference, named IDLEBOT. Bestowed Certificate of Merit 2020.
- Developed Ransom-ware Detection tool modeling file change log in Veritas Filesystem (VxFS). presented project in Veritas's annual Hackathon, 2021. Lead effort to start ML Systems group in Org.
- Debugged in kernel and user mode on RHEL, SLES, Solaris, and AIX platforms. Worked on migrating filesystem from little-endian to big-endian system. Solved high-priority customer escalations for the Veritas File system.

Engineering Intern, Veritas Technologies LLC, Pune, India, 01/2017 – 06/2017
- Reduced execution time of variants of 'ls' command by 20% by employing directory inode read ahead algorithm (speculative execution) on VxFS.

PROJECTS
- Re-identification SoccerNetv3 (2022) – Soccer player re-identification leveraging two-stream (RESNET + OpenPose sub-network) deep neural network using layer-wise triplet similarity loss. Employed Bilinear pooling to pool features from two streams. Beat SOTA OSNET by 2.1% in MAP and 1.8% in IOU.
- Breast Cancer Detection (2022) – Evaluated SOTA methods such as VGG-19, RESNET-50, Vision Transformer, MobileNet, etc. on Breast Mammograms datasets - INBreast and DDSM. MobileNet performs best with an accuracy of ~90% on DDSM and ~73% on the INBreast dataset.
- Pintos (2021) – Implemented process schedulers (Priority and MLFQS), system calls for filesystem interfaces (read, write, create etc.) in Unix-based OS.
- IDLEBOT (2018-2020) – Developed command line tool to recommend optimal time slot for execution of resource-intensive tasks in Veritas product portfolio using LSTM, FB-Prophet, and ARIMA. The proposed novel "Weighted time-slot selection algorithm" to select an optimal slot achieved a 56% reduction in exec. time.

CERTIFICATIONS/ONLINE COURSES
- EDX Honor of code Introduction to R programming by Data Camp Microsoft.
- Practical Deep Learning For Coders, Part 1 and Part 2 fast.ai.