SRIVATSAV GUNISETTY

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Experience

Informatica **November 2021–July 2022**
Software Engineer - 2 *Bangalore, Karnataka*

- Perfected 3 vital components (adapters SDK, eDTM, and Lineage service) of Informatica's Big Data Management(BDM) product comprising 30+ sub-components developed in C++ & JAVA.
- Investigated and fixed critical customer issues. Debugged through complex Joiner, Expression, and Router transformation logics comprising 15000+ lines of legacy code in extreme multi-threaded (>#50) environments with recursion depths beyond 15.
- Reinforced product security by identifying, removing/upgrading vulnerable third-party binaries including Log4j from 60+ components.

Philips Innovation Campus **January 2020–October 2021**
Software Engineer - 1 *Bangalore, Karnataka*

- Devised an auto recovery mechanism for remotely connected Gantry Display devices in event of failure; there by saving US$1 million (1M) spent on shipping these corrupted gantry devices yearly.
- Worked on harmonizing and automating the OS build and deployment pipelines across several Business Units. While reducing risk of manual errors, this saves 40+ man-hours required to release a new OS version every month.
- Designed an automated and self-reliant component test framework to seamlessly validate hundreds of component configurations involved in OS & ISO building.
- Conceptualized a robust automation tool to reduce 95% of manual steps required for configuring multiple displays of a Magnetic Resonance Imaging (MRI) console machine.

Indian Institute of Space Science & Technology **May 2019–July 2019**
Summer Internship *Trivandrum, Kerala*

- Overhauled SiameseFC tracker by incorporating RefineNet modules to solve short-term sub-track of Visual Object Tracking challenge. The model was designed and developed using a MATLAB toolbox, MatConvNet.
- Attained an average IoU of 0.336 on unseen video sequences of VOT2013 and VOT2016 Short-Term track datasets and was trained on ILSVRC2015 VID dataset.

Amrita School of Engineering **June 2018–July 2018**
Summer Internship *Bangalore, Karnataka*

- Performed a detailed study on the correlation between Batch Size and inference times with 4 different CPU and GPU architectures on 6 major CNN models. Formulated and presented the results at ICACCS2020 conference[2].
- Achieved an average speedup of 1.62x in CNN inference times with novel split and re-split strategies which efficiently balance workload among different hardware architectures in a heterogeneous cluster.

Education

University of Southern California **August 2022–May 2024(Exp.)**
Master of Science in Computer Science *Los Angeles, California*

Amrita Vishwa Vidyapeetham **July 2016–May 2020**
Bachelor of Technology in Computer Science and Engineering *Kollam, Kerala*

- *summa cum laude scholar* - Ranked 6 of 250 students. **CGPA: 9.49/10**

Academic Projects

Dynamic Search Paths for Visual Object tracking | *Python, VSCode, OpenCV* **December 2019**

- Conceived an elegant, non-Deep learning solution to tackle long-term sub-track of Visual Object Tracking challenge using Kalman Filter and CW-SSIM.
- Analyzed and modeled trajectories of target objects in 30+ video sequence of VOT2018 LT dataset to a system of linear system of equations using physical laws of motion.
- Achieved an average improvement of 37.4% in IoU than the SOTA MBMD tracker. Results presented to COCONET2020 [1].

Technical skills

Languages: C++, JAVA, C#, MATLAB, SQL, Python
Scripting Languages: PowerShell, Bash Script, VBScript
Frameworks & Libraries : Pandas, Keras, MatConvNet, Caffe, TensorFlow, Numpy
Miscellaneous: Visual Studio, VSCode, Jupyter Notebooks, Git, Windows, Linux

Publications

[1] Gunisetty S., et. al (2021) Dynamic Search Paths for Visual Object Tracking. In: Thampi S.M., et. al (eds) Advances in Computing and Network Communications. Lecture Notes in Electrical Engineering, vol 736. Springer, Singapore. doi: 10.1007/978-981-33-6987-0_31.

[2] K. Vanishree, et. al 'CoIn: Accelerated CNN Co-Inference through data partitioning on heterogeneous devices,' 2020 6th International Conference on Advanced Computing and Communication Systems (ICACCS), 2020, pp. 90-95, doi: 10.1109/ICACCS48705.2020.9074444.