Srivatsav Gunisetty

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Education

University of Southern California **August 2022–May 2024(Exp.)**
Master of Science in Computer Science Los Angeles, California
- Coursework: CSCI570 Analysis of Algorithms, CSCI585 Database Systems.

Amrita Vishwa Vidyapeetham **July 2016–May 2020**
Bachelor of Technology in Computer Science and Engineering Kerala, India
- *summa cum laude scholar* - Ranked 6 of 250 students. **CGPA: 9.49/10**

Experience

Informatica **November 2021–July 2022**
Software Engineer - II | *C++, JAVA* Bengaluru, India
- 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 **multi-threaded (>#50)** environments with **recursion** depths beyond 15.
- Reinforced **product security** by removing and upgrading vulnerable third-party binaries including **Log4j** from 60+ components.

Philips Innovation Campus **January 2020–October 2021**
Software Engineer - I | *C++, PowerShell, C#* Bengaluru, India
- Devised an auto recovery mechanism using **PowerShell scripts** 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**
Research Intern | *MATLAB, Python* Trivandrum, India
- 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** (higher the better) 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**
Research Intern | *Python, Caffe, Bash script* Bengaluru, India
- 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.**
- 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.

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.**

Stay Late and Code | *PHP, AngularJS, MySQL* **March 2019**
- Engineered a full stack attendance tracking solution for Corporate Industry Relations wing to track attendance and progress of 200+ students. Implemented geo-fencing mechanisms on client-side to eradicate proxy attendance.
- Boosted student's productivity by 20% while reducing 5+ man hours spent weekly by the administration.

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