SATYANARAYANA CHILLALE

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EDUCATION

New York University, Courant Institute of Mathematical Sciences New York, NY
*Master of Science in Computer Science; **GPA: 3.9/4.0*** *Aug 2023 – May 2025*

- **Relevant coursework:** Honors Analysis of Algorithms, Artificial Intelligence, Deep Learning, Conceptual Gaps in Modern Machine Learning, Operating Systems, Computer Vision, Big Data Application Development, GPUs

PES University Bangalore, India
*Bachelor of Engineering in Computer Science and Engineering; **GPA: 3.6/4.0*** *Aug 2013 – June 2017*

- **Relevant coursework:** Data Structures with C, Unix, Operating Systems, DBMS, Software Architecture, Computer Architecture, Systems Software, Software Engineering
- Achieved a top 5 ranking out of 200 teams at the inGenius Hackathon for developing a solution that substantially reduces ambulance travel time.

WORK EXPERIENCE

Oracle India Private Limited Bangalore, India
Senior Member Technical Staff *May 2021 – Aug 2023*

- Spearheaded the transition of the Oracle Blockchain Platform from on-premise to a **cloud-based Kubernetes architecture** using service mesh. Played primary role in designing security, networking, and deployment.
- Key member of a five-engineer team that developed and launched MicroTx, a **cloud-native GoLang service** for orchestrating distributed transactions across polyglot micro-services, achieving a throughput of 2200 transactions per second. Developed the (CI/CD) pipeline on jenkins.
- Mentored two junior developers, providing training to transition smoothly from academia to corporate roles.

SAP Labs India Private Limited Bangalore, India
Developer *July 2017 – May 2021*

- Implemented a **server-driven user interface system** that streamlines front-end development and delivered 5x acceleration in product and feature development and saved up to 50% of engineering resources.
- Developed data browsing features and security for a HANA database browser tool, Data Preview and implemented several Eclipse IDE plugins for enhancing the productivity of enterprise application developers.
- Delivered numerous lectures and workshops at SAP TechEd, a global technology event, focusing on development of modern enterprise applications using the RESTful ABAP Programming Model.

SKILLS

Programming: Java, Go, C++, Python, CUDA	**ML:** PyTorch, scikit-learn, Pandas, NumPy
Cloud: Docker, Kubernetes, Istio, Helm, AWS	**Databases:** SQL, PostgreSQL, MongoDB, etcd
Frontend: React, Next.js, Vue.js, TypeScript, SWT	**Backend:** Node.js, Helidon, REST, GraphQL, Spark

PROJECTS

- **Future Video Frame Prediction:** Secured a top-five position among 20 teams in a course project that predicted the 22nd frame of a video featuring moving objects of various shapes, colors, and sizes. Utilized the **UNet architecture** for mask generation and implemented **Masked Conditional Video Diffusion** to model object movements and generate the final frame accurately.

- **Image Geolocation:** Developed an advanced image geolocation system using CLIP and RAG techniques. Implemented a **novel hierarchical feature clustering approach**, reducing the search space by 100x while maintaining accuracy comparable to state-of-the-art methods. The system achieved competitive performance on the IM2GPS3k benchmark, with up to 85.08% accuracy at the continent level and 15.01% at the street level.

- **Cola Kernels:** Developed **custom CUDA kernels for Compositional Linear Algebra framework**, focusing on Arnoldi iteration, Cholesky decomposition, Hutchinson trace estimation, and SVD. Achieved up to 5x speedup and reduced memory usage by 8x compared to PyTorch implementation.

SOFT SKILLS

- Drove public engagement initiatives while serving as the Vice President of Public Relations at Ascent Toastmasters.
- Certified as a Competent Communicator and Leader by Toastmasters International.