

Sathya Narayanan Kasturi Rangan

Senior Software Engineer, Cruise

To apply state-of-the art algorithms in Computer Science for solving real-world problems.

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Experience

Rivo Sunnyvale
Member of Technical Staff December 2025 - Present
<https://www.rivofi.com/>

Cruise Sunnyvale
Senior Software Engineer March 2021 - January 2026

- Owned the entire pipeline for structured perception datasets as part of E2E Model Infra team.
- Technical Lead for the Perception Canary System, overseeing cache construction for model evaluation, enabling robust performance analysis and deployment confidence across perception models.
- Owned end-to-end development of near-field pedestrian detection systems leveraging Ultrasonic sensors and short-range LiDARs, improving safety measures for vulnerable road users (VRUs) in critical proximity scenarios.
- Contributed to the migration of the current perception stack to support next-generation autonomous vehicle platforms, collaborating closely with the tech lead to ensure scalability, reliability, and architectural alignment

Voyage (Acquired by Cruise) Mountain View
Software Engineer Feb 2020 - March 2021

- Created end-to-end pipeline for intrinsic camera calibration, lidar-to-lidar calibration and camera-to-lidar calibration

- Developed algorithm to automatically remove of dynamic objects from lidar maps used for background subtraction

NIO San Jose
Localization Engineer June 2018 - Jan 2020

- Developed Simultaneous Calibration and Mapping algorithms for multiple LiDARs
- Created an end-to-end pipeline for real-time LiDAR-based Mapping and Localization using surfels - Surfel SLAM

NIO San Jose
Computer Vision Intern May 2017 - May 2018

- Worked on Visual Self-Localization of Autonomous vehicles in GPS-denied environments
- Implemented LiDAR-to-LiDAR and LiDAR-to-Camera calibration
- Implemented visual LiDAR odometry and Lane tracking for Adaptive Cruise Control

Education

Worcester Polytechnic Institute Master of Science • 4.0 GPA
Robotics Engineering May 2018

SASTRA University Bachelor of Technology • 9.1 GPA
Mechanical Engineering May 2016

Skills

Programming Languages

C, C++, Python



Publications

Pagad, S., Agarwal, D., Narayanan, S., Rangan, K., Kim, H., & Yalla, G. (2020, May). Robust Method for Removing Dynamic Objects from Point Clouds 2020

IEEE International Conference on Robotics and Automation (ICRA)

Kim, H., Rangan, S. N. K., Pagad, S., & Yalla, V. G. Motion-based Calibration between Multiple LiDARs and INS with Rigid Body Constraint on Vehicle Platform 2020

IEEE Intelligent Vehicles Symposium (IV)

Rangan, Sathya Narayanan Kasturi, et al. "Improved localization using visual features and maps for Autonomous Cars." 2018

IEEE Intelligent Vehicles Symposium

Workspace Analysis and Optimization of 3-RRR Planar Parallel Manipulator 2015/12/27

Trans Tech Publications Ltd
<https://www.scientific.net/AMM.813-814.1047>

US 15650761 - Control of complex parking maneuvers and autonomous fuel replenishment of driverless vehicles

Patent

US 16246810 - Vehicle self-localization using particle filters and visual odometry

Patent

US 15798016 - Visual place recognition based self-localization for autonomous vehicles

Patent