**JAHNAVI YERRAMELLI**  
Mobile: +91-8247882013/+91-8125752013 Gmail: [yerramellijahnavi@gmail.com](mailto:yerramellijahnavi@gmail.com)

**Professional Summary**Results-driven Software Engineer with 3+ years of experience at Continental Autonomous Mobility, specializing in C++ development for sensor fusion systems, particularly static object fusion. Proficient in Python scripting for automation, improving development efficiency. Strong focus on delivering high-quality software in the automotive domain.

**Technical SkillsProgramming Languages:** C++, Embedded C, Python  
**AI & Machine Learning:** Neural networks  
**Software Development:** Sensor Fusion, Embedded Systems, AUTOSAR DCM, DEM  
**Tools & Technologies:** Git, Visual Studio, PyCharm, JIRA, Davinci, Canoe, Lauter Bach, IBM Doors, Cmake, Plantuml, Yolo for object detection with CV.  
**Methodologies:** Agile, Scrum, Test-Driven Development (TDD), ASPICE, Structured problem solving

**Professional ExperienceContinental Autonomous Mobility**  
*Software Engineer* 10/2022-Present  
[Bangalore, Karnataka] | [October 2021] Bangalore, India

SEF (Static Environment Fusion):

* Contributed to multiple implementation tasks within the SEF module, including bug fixes, debugging, and enhancements to fusion, and association algorithms.
* Supported issue analysis by tracing failures and performance bottlenecks across different static input sources.
* Participated in code reviews, and actively contributed to design document updates and system improvement discussions.

RMF (Road Model Fusion):

* Led scenario creation in CarMaker to evaluate RMF performance due to a lack of baseline benchmarks.
* Designed **custom test environments** simulating road conditions (curves, intersections, lane changes) to assess model accuracy and edge case handling.
* Provided support in code review and validation, contributing to better path prediction, and lane modelling fidelity.

TPF (Traffic Participant Fusion):

* Conducted **pre-analysis of test scenarios** to understand performance gaps in TPF under varying traffic conditions.
* Tuned fusion parameters based on observed **latency, classification accuracy, and object tracking stability**.
* Contributed to early-stage validation and testing of fusion logic for dynamic participants (vehicles, pedestrians, etc.).

**Continental Autonomous Mobility**  
*Graduate Engineer Trainee* 10/2021-10/2022  
[Bangalore, Karnataka] | [October 2021] Bangalore, India

**Proof of Concept (PoC)**: Enhancing SEF with Camera Integration.

* Initiated and contributed to a PoC demonstrating **the impact of camera input** on SEF system performance.
* Evaluated how visual data from the camera could improve classification, reduce false positives, and support better environmental modelling.
* Compared SEF performance **with and without camera data**, presenting findings on precision, recall, and system latency improvements.
* Enabled deeper discussions on multi-sensor fusion architecture and the role of visual data in static perception scenarios.

**EducationBTech** in Electrical and Electronic Engineering  
Amrita University Kollam, Kerela  
Graduated: June 2021

**AwardsSpot Award for my contributions in ADCU DCM [0x19-DEM]**  
 Received a recognition on my attitude of ready to learn and taking up new challenges while contributing in ADCU DCM-0 x19 service.

– Continental Autonomous Mobility - July 2024

**Spot Award for Innovation activities and teamwork** Received an award on my collaboration with team in filing new ideas.

– Continental Autonomous Mobility - Oct 2023

**Spot Award for Improving the SEF performance.** Received a recognition award on my work in improving the SEF performance.

– Continental Autonomous Mobility – Nov 2022

**Certifications**Certified C++ programmer  
AI/ML certification  
Embedded C certified programmer

**ProjectsCEM- SEF developer:**   
 Developed a robust C++ application for sensor fusion and optimized various implementation that improved the accuracy of static object detection in varying environmental conditions.

**TPF, RMF Modules:** Played a support role in improving RMF and TPF performance in lane and line detections and traffic participant fusion in varying environmental conditions.

**AUTOSAR- ADCU DCM [0x19-DEM] developer:**   
 Designed and streamlined the testing and validation of the AUTOSAR DEM module, ensuring compliance with industry standards.

**EM-** **Automation Tester using python scripting:** Developed the python scripts to identify different issues in the output objects which reduces the manual analysis efforts.

**Professional Affiliations**

* Member, [Relevant Professional Organization, e.g., IEEE, SAE International]

**References**

Available upon request.

POC:

"As part of our work on Static Environment Fusion, I proposed and contributed to a Proof of Concept to evaluate the impact of integrating camera data into our existing sensor fusion system. While our setup mainly relied on static radar and LiDAR, we hypothesized that camera input could improve classification accuracy. I worked on fusing semantic cues from the camera and measured performance improvements in object consistency and false positive reduction. This PoC sparked discussions on updating the system architecture to support vision-based fusion."

C++:

Mandatory:

Intermediate topics:

* Templates
* Type casting.
* Static variables
* Overriding and overloading [function and operator]

Complex topics:

* Data structures [linear DS: static DS-> Array, Dynamic DS-> Queue, Stack, Linked Lists || Non-linear DS: Tree, graph]  
  Containers[Array, lists, vector, set, map, stack, queue, string, heap, matrix]
* OOPS: [classes, objects, constructors, inheritance, polymorphism, encapsulation, abstraction, virtual class/method, default class]
* Pointers
* Static and dynamic memory allocation

Optional:

Complex topics:

* Multithreading
* Lambda expression
* Libraries [OpenCV]

Intermediate topics:

* Basics on IDE, build systems[Cmake], compilers[GCC, Mingw], package managers[Conan].
* Basic operators [arithmetic, bitwise, logical, loops]
* Frameworks [gtests]
* Datatypes [Auto keyword]





