



ISHAN ROY CHOWDHURY

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Date of birth: 04/03/1992 **Nationality**: Indian

ABOUT ME

Strong ADAS Software Developer with 5+ years of experience in positioning systems. Proven ability to deliver localization and map reconstruction solutions for Level 2/3 autonomous vehicles (Mercedes Benz). Skilled in C/C++, Python, SQL, and large-scale data analysis. Extensive experience in end-to-end testing using GTEST, ensuring adherence to ASPICE standards. Located in Croatia, seeking EU opportunities in both ADAS and classical software development (Germany preferred).

WORK EXPERIENCE

[06/08/2018 – 19/04/2024]

Senior Software Engineer

Mercedes Benz Research and Development India

City: Bangalore | **Country**: India

- Last Worked on :
 - reconstruction of SD (Standard Definition) Maps using **ADASIS V2** protocol for the upcoming generations of Automated Driving feature of Mercedes Benz L2 Systems in collaboration with Nvidia.
 - Responsible for developing safety critical high quality software which involves activities such as requirement implementation, with complete freedom of design decisions of software module developed in **C++** on **AUTOSAR Adaptive stack**.
 - Build the testing framework for testing the implemented requirements at Software In Loop using **GTEST(SWE6)** and a framework for unit testing the public interfaces using **GTEST** at (**SWE4** level) confirming to **ASPICE** standards.
- Developed and tested module end to end for **longitudinal localization** of the vehicle for Level-3 Drive Pilot feature. The signatures from High definitions maps (ADASIS V3) are compared against fused sensor signatures using probabilistic models to estimate vehicle's current position with centimeter level accuracy confirming to **ISO 26262 standards**.
- Contributed to reconstruction of HD Maps module for positioning using ADASIS V3 data on **AUTOSAR classic stack** in **C** for SAE Certified Mercedes Benz Level 3 Systems with Drive Pilot feature.
- Performed Large Scale Analysis using **Python**, **SQL** and Bigdata to find undetected issues in vehicles prior to release.

EDUCATION AND TRAINING

[01/06/2016 – 01/06/2018]

Master of Engineering in Computer Science

Jadavpur University <http://www.jaduniv.edu.in/>

City: Kolkata | **Country**: India | **Field(s) of study**: Computer Science and Engineering | **Final grade**: 8.27 | **Thesis**: 'Fine-Grained' Human Activity Recognition Using Smartphone Accelerometer Data : Thesis aims at making HAR models which can identify "fine-grained" distinctions in "Coarse-Grained" activities

from Smartphone Accelerometer Data using Machine Learning Algorithms and feature engineering.

Links: <https://www.mdpi.com/2078-2489/9/4/94> | <https://ieeexplore.ieee.org/document/8470425> | <https://dl.acm.org/doi/10.1145/3170521.3170540>

Relevant Coursework: Machine Learning, Advanced Database System Concepts, Pattern Recognition, Soft- Computing, Bioinformatics, BigData Analytics, Advanced Algorithm

Publications:

- Saha J, Chowdhury C, Roy Chowdhury I, Biswas S, Aslam N, "**An Ensemble of Condition Based Classifiers for Device Independent Detailed Human Activity Recognition Using Smartphones**", Information. 2018; 9(4):94. <https://www.mdpi.com/2078-2489/9/4/94>
- Ishan Roy Chowdhury, Jayita Saha, Chandreyee Chowdhury, "**Detailed Activity Recognition with Smartphones**", EAIT 2018, IEST Shibpur. <https://ieeexplore.ieee.org/document/8470425>
- Jayita Saha, Chandreyee Chowdhury, Ishan Roy Chowdhury, and Priya Roy, "**Fine Grained Activity Recognition using Smart Handheld**", ICDCN 2018 Varanasi. <https://dl.acm.org/doi/10.1145/3170521.3170540>

[01/05/2011 – 01/05/2015]

Bachelor of Technology in Computer Science

Maulana Abdul Kalam Azad University of Technology <https://www.makautexam.net/>

City: Kolkata | **Country:** India | **Field(s) of study:** Computer Science and Engineering | **Final grade:** 8.20

Relevant Coursework: Engineering Mathematics, Discrete Mathematics, Design and Analysis of Algorithms, Data Structures, Theory of Computation

LANGUAGE SKILLS

Mother tongue(s): Bengali

Other language(s):

English

LISTENING C2 READING C2 WRITING C2

SPOKEN PRODUCTION C2 SPOKEN INTERACTION C2

German

LISTENING A1 READING A1 WRITING A1

SPOKEN PRODUCTION A1 SPOKEN INTERACTION A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

PATENTS

[10/08/2021]

SYSTEM FOR PATH CONFIRMATION OF A VEHICLE AND METHOD THEREOF

Application Number: 202111036145

Patent in product, for SAE Level 3 Mercedes Benz Systems V297 (EQS), 223.