



## Elvis Desai

MSME, ACTAR

### Senior Accident Reconstructionist

#### Department

Accident Reconstruction & Forensic Animation

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#### Locations

San Diego, CA

## Biography

Mr. Desai is an Automotive Engineer and Senior Accident Reconstructionist with ACTAR accreditation and has worked in these fields since 2017. Mr. Desai holds a Master of Science degree in Automotive Systems Engineering with a specialty in Vehicle Safety from Kettering University. Mr. Desai has experience conducting complex 3-dimensional accident reconstruction. He is qualified to download and analyze all types of Event Data Recorders and Bosch Crash Data Retrieval (CDR) data. He holds Certification to download and interpret EDR data from heavy-duty vehicles. Mr. Desai also has experience working with photogrammetry, 3D designs, and video editing software for accident reconstruction purposes.

## Credentials

- MSME | Master of Science - Mechanical Engineering
- ACTAR | ACTAR - Accreditation Commission for Traffic Accident Reconstruction, 2022 - Number 3949
- FAA Certified Drone Pilot
- iNput Ace - iNPUT-ACE Metrology Certification (IAMC), 2022
- iNput Ace - iNPUT-ACE Examiner Certification (IAEC), 2022
- iNput Ace - iNPUT-ACE Operator Certification (IAOC), 2022
- SAE - Accessing and Interpreting Vehicle Event Data Recorders, 2021
- TAARS - Nighttime Accident Reconstruction Training, 2021
- CDR - Certified Crash Data Retrieval Specialist (Collision Safety Institute), 2020
- CDR - Certified Advance EDR data Interpretation (Rick Ruth Consultancy), 2020
- Photomodeler - Certification of Photomodeler Technologies, 2020
- IDRR - Certification of Training for IDRR software (Crash Safety Solution), 2020
- PART 107 Certification: Certificated Remote Pilots Commercial Operator of Drone 2020

## Representative Consulting Assignments

- Accident Reconstruction: | Reconstruction of automobiles, heavy trucks, bus, bicycle, motorcycle, and pedestrian accidents. Collision analysis, scene investigation and drawings, skid and crush analysis, photography, vehicle inspection, velocity/damage analysis, and vehicle dynamics. Reconstruction of vehicular and motorcycle accidents. Design and execution of full-scale vehicle crash tests and vehicle dynamics testing and data analysis. Computer-based accident reconstruction using PC-Crash. Brake, engine, transmission, and suspension failure.
- Automotive: | Diagnostics, brakes, steering, engines, clutches, transmissions, drive train, suspension, frame, noise/vibration/harshness (NVH).
- Computer and Classical Analysis: | Computer-based accident reconstruction, finite element modeling, stress, fatigue, buckling, creep, nondestructive and destructive testing and kinematics.

- Photogrammetry: | Creating 3D models out of images, measuring crush of the damaged vehicle with the help of exemplar vehicle photographs, and determining speed of the vehicle from a video.

## Professional Experience

- 2023 - Current | Senior Forensic Engineer | YA Engineering Services
- 2022 - 2023 | Forensic Engineer | Momentum Engineering Corp.
- 2020 - 2022 | Accident Reconstruction Engineer | JS Forensics LLC
- 2017 - 2019 | Graduate Research Assistant | Kettering University

## Area of Practice

- Accident Reconstruction
- Damage Assessment
- Heavy Trucking
- Human Factors

## Publications and Presentations

- 2021 - Desai, E., Wang, P., Suway, J., and Engleman, K., "Bicycle GPS Positional Accuracy", SAE Technical Paper
- 2022 - Engleman, K., Vega, H., Suway, J., and Desai, E., "Positional Accuracy of Portable GPS Devices during Different Ride Conditions", SAE Int.

## Education

- Kettering University - Master of Science and Engineering - Automotive System Engineering - Fint - Michigan
- LDRP Institute of Technology and Research - Bachelor of Engineering - Mechanical Engineering - Gandhinagar - India
- World Reconstruction Exposition (WREX) - April 2023
- CAARS Fall Conference: Emerging Technology and Doing More with What You Have - 2022
- CAARs Quarterly Training: ABS and non-ABS deceleration rates on different surfaces - Sep 2022
- CAARs Quarterly Training: Understanding Ignition Cycles in Investigations - May 2022
- Photomodeler Pro Crush from Photos using Vehicle Point Cloud - 2021
- SAE WCX Digital Summit - April 2021
- EDC Reconstruction Course - Nov 2020
- TAARS nighttime Accidents and Human Factors Concepts on Accident Reconstruction - Oct 2020
- NAPARS Session 4 of 7: Use of PRT in different cases - Oct 2020
- HFES 64th International Annual Meeting driver behavior with autonomous vehicle - Oct 2020
- Webinar Warren NC: Motorcycle Crashes, Things to Consider - June 2020

## Affiliations

- SAE
- CA2RS
- SATAI
- NAPARS