

EDUCATION :

Associates of Pre-Engineering in Mechanical Engineering

REGISTRATION

Accredited Traffic Accident Reconstructionist (A.C.T.A.R.),
Registration No.2328

EXPERIENCE:

Accident Reconstruction Knott Laboratory, LLC 5/2025
Lead Detective Unified Police Collision Analysis and Reconstruction
(C.A.R.) unit 05/2022 to 05/2025
Detective Unified Police C.A.R. unit 11/2011 to 05/2022
Detective Salt Lake County Sheriff's Major Accident Team unit (M.A.T.) 08/2008 to 12/2010
Salt Lake County Sheriff's Deputy 08/2005 to 08/2008
Salt Lake County Sheriff's Corrections Officer 08/2002 to 11/2004



COLLISION RECONSTRUCTION :

Mr. Masock has managed the manpower of a multi-agency agreement which investigated major collisions involving serious bodily injury or death. This included the management of scene evidence collection, interpretation and analysis. Mr. Masock assisted other local agencies in the Salt Lake County region with training and instruction in the mathematical analysis of collision dynamics. This included but is not limited to complete reconstruction of collisions, light timing, time distance analysis, pre and post speed analysis, CDR data collection and analysis, impairment, human factors, energy from crush, case screening, court preparation and presentation. Over the course of Mr. Masock's employment with both the Unified Police Department and Salt Lake County Sheriff's Office, Mr. Masock has completed or assisted with the completion of nearly 1000 cases involving serious bodily injury or death.

COLLISION RECONSTRUCTION TECHNOLOGIES :

Mr. Masock uses various technologies and software available in collision reconstruction throughout all stages of analysis, evidence gathering, time distance, light timing, human factors and vehicle data systems (Electronic Data Recorders or Airbag Control Modules). Scene documentation may be collected using laser mapping or drone photogrammetry. This data is processed using software to complete a 3D image in virtual space where measurements and evidence can be analyzed to complete the reconstruction. Mr. Masock is certified in Bosch CDR (Crash Data Retrieval) software in both retrieval and analyzing collected data images. In addition, Mr. Masock is a certified FARO laser scanner instructor.

EXPERT TESTIMONY:

As a result of Mr. Masock's investigations and analyses, he has provided expert testimony in court and has been brought in as an advisory witness by the District Attorney's Office. Mr. Masock has been utilized in both plaintiff and defendant motor vehicle collisions.

INVESTIGATION AND POLICING:

Mr. Masock's investigation with both the Salt Lake County Sheriff's Office and the Unified Police Department included evidence gathering of physical, digital, video, photographic, witness interviews, searches, phone records, GPS data both by phone location and possibly vehicle infotainment systems to potentially map vehicle path of travel. He has experience in DUI enforcement, use of force and de-escalation, and traffic incident management.

2025

1. **UDOT, Traffic Signal Training for Law Enforcement (07/17/2025)**
Light timing regarding how detection and traffic signals work. This includes phasing, timing, coordination, and systems. Understanding programming and ATSPM. Including re-certification test taken 08/08/2025 (8 hrs)
2. **JS Held, Advanced Collision Reconstruction with CDR Applications (02/03-07/2025)**
CDR information applications pertaining to crash analysis and Reconstruction. (40 hrs)

2024

3. **Utah Transportation Conference (11/05-07/24)**
(Speaker) Human Factors Related to Crashes on Roadways
4. **Mechanical Forensics Engineering Services, LLC Advanced Motorcycle Crash Analysis (08/12-16/24)**
Instruction on techniques and analysis of collision reconstruction of motorcycle involved incidents. Including dynamics specific to motorcycle braking, skidding, and sliding across road surfaces (40 hrs)

2023

5. **Accident Analysis and Reconstruction. Inc Crush Energy Analysis (06/26-06/30)**
Crush energy analysis, damage and energy applications for Collision reconstruction using "crush" (40 hrs)
6. **WREX Crash Conference, Orlando Florida (04/17-04/21)**
Live crash testing, conference presentations on motorcycle reconstruction, use of Toyota live stream, tire inspection, perception and response times, and 3D scanning information. (40 hrs)
7. **Forensics Training Group, Heavy Vehicle Event Data Recorder (03/27-31/23)**
Certificate of training for the use of HVEDR in traffic crash investigation with instructions for the Forensic Link Adapter and Smart Sensor Simulator #2 (40 hrs)
8. **Forensics Training Group, Heavy Truck Reconstructions Techniques (02/06-10/23)**
Heavy vehicle reconstruction techniques including brake inspection, understanding of air brake systems, brake fade, adjusted friction values, rollover, trailer off tracking, under ride and using energy to solve for braking ability. (40 hrs)
9. **UDOT, Traffic Signal Training for Law Enforcement (01/11-12/23)**
Light timing regarding how detection and traffic signals work. This includes phasing, timing, coordination, and systems. Understanding programming and ATSPM. (16 hrs)

2022

10. **Accident Analysis & Reconstruction Inc., Accident reconstruction**
RECON 1 is the equivalent to Northwestern University's TAR 2 with additional TAR 3 applications. The course utilizes an approach to identify pre and post collision velocities based on vehicle movement into and the change of direction headings. In addition, the course explores the application and importance of time distance in the analysis of collisions to assist with avoid ability analysis. (80 hrs)
11. **Accident Analysis & Reconstruction Inc., Use of Excel in Accident Investigation (10/03-07/2022)**
Instruction in the use of excel to aid in the investigation of collisions (40 hrs)
12. **Crash Data Specialists LLC., Advanced Collision Reconstruction with CDR Applications (03/21-25/2022)**
CDR information applications pertaining to crash analysis and Reconstruction. (40 hrs)

13. BERLA iVe (3/7-11/22)

Instruction on the use of hardware and software developed Berla to access the data contained in vehicles infotainment center. During the 40-hour training I became certified as a vehicle system forensic technician and vehicle system forensics examiner (40 hours)

2021**14. Associates of Pre-Engineering**

SLCC program: Engineering/Mechanical APE, graduation date 08/07/21

15. FARO SCANNER CERTIFICATION TRAINING (5/9-14/21)

Train the trainer for FARO 3D laser scanner certifications. Instruction on the use and operation of the FARO Focus 3D laser scanner with additional certification as an instructor to train others in the operation of the scanner and Scene software for registration. (40 hrs)

2020**16. Crash Safety Solutions, LLC (2/23-25-20)**

IDRR (Interactive Driver Response Research) user forum and training for human factors perception and response software. IDRR software is used to determine the response time for test subjects in case studies using similar methodology in controlled scenarios and how to compare the actions of an involved driver to documented case studies. (32 hrs)

2019**17. Utah Department of Transportation (5/23/19)**

Instructions on light timing to include phasing, timing, vehicle detection technologies, automated signal performance measures and their use in crash reconstruction (4 hrs)

2018**18. Rudy Limpert, Motor Vehicle Accident Reconstruction and Cause Analysis (10/15-10/18)**

Understanding the MARC program and how to utilize it in Crash Reconstruction Basic collision reconstruction, covering the use of crash, momentum, and energy (32 hrs)

19. Federal Highway Administration, Road Safety Assessment Workshop (3/26-27/18)

Instruction on road safety assessment, incorporation of roadway factors in collisions, light timing and understanding intersection conflicts. Importance of communication between investigations and road design to make safer roadways. (12 hrs)

2017**20. ARC-CSI Las Vegas Crash Conference (9/18-21/2017)**

Live crash testing and data collection with an emphasis on automobile/pedestrian collision analysis, pre and post collision analysis, and conference presentations (32 hrs)

21. Northwestern University, Crash Data Retrieval–Data Analyst (5/1-5/2017)

Understanding and analysis of data retrieved from CDR and MCL units
Regarding information for deployment events (40 hrs)

22. Crash Data Specialists LLC., Advanced Collision Reconstruction with CDR Applications (03/21-14/2017)

CDR information applications pertaining to crash analysis and Reconstruction. (32 hrs)

2016**23. ARC-CSI Las Vegas Crash Conference**

Live crash testing and data collection with an emphasis on motorcycle collision analysis, pre and post collision analysis, and conference presentations (40 hrs)

2015**24. 3D advanced Forensics training (11/9/15)**

Instruction on the use of advanced techniques in software application of the FARO scene software for registration of multiple data sets including FARO freestyle scanner data and photograph integration. (40 hrs)

25. FARO 3D scanner operator (3/23-25/2015)

Instructions on the operation and software applications of using the FARO 3D laser scanner in completion of scene surveys (24 hrs)

2014**26. Accident Analysis & Reconstruction Inc., Pedestrian Reconstruction Investigation (6/16-20/2014)**

Analysis of evidence from Auto/pedestrian collisions and speed calculations from throw distances. Included instruction on strengths and weaknesses of various equations used in the analysis of auto/ped collisions (40 hrs)

27. Crash Data Specialists LLC., Advanced Collision Reconstruction with CDR Applications (06/10-13/2014)

CDR information applications pertaining to crash analysis and Reconstruction. (32 hrs)

28. U.S. Department of Transportation Federal Highway Administration, Traffic Incident Management/TIM (4/9-10/14)

Traffic incident management and response training. Train the trainer course on Incident response, multi-agency coordination and safety instruction of handling traffic collisions (24 hrs)

2013**29. Northwestern University, Heavy Vehicle Reconstruction (11/4-8/2013)**

Analysis of heavy vehicles and how they react in vehicle collisions with emphasis braking systems, inspection, and off tracking. (40 hrs)

30. Accident Analysis & Reconstruction Inc., Pedestrian Reconstruction Investigation (6/10-14/2013)

Analysis of evidence from Auto/pedestrian collisions and speed calculations from throw distances. Included instruction on strengths and weaknesses of various equations used in the analysis of auto/ped collisions (40 hrs)

31. Delta V recon, LLC. Vetronix/Bosch Crash Data Retrieval Course Tech 1 & 2 (3/8/2013)

Crash data retrieval tech 1&2, instruction on the use of the CDR tool including Collection, imaging, and back power solutions (8 hrs)

2012**32. Northwestern University, Human Factors (12/10-14/2012)**

Analysis of human behavior regarding perception and reaction time Based on case studies utilized in the IDRR software (40 hrs)

33. Accident Analysis & Reconstruction Inc., Advanced Collision Reconstruction with CDR Applications (11/12-16/2012)

CDR information applications pertaining to crash analysis and Reconstruction. (40 hrs)

34. Accident Analysis & Reconstruction Inc., Use of Excel in Accident Investigation (10/15-19/2012)

Instruction in the use of excel to aid in the investigation of collisions (40 hrs)

35. Accident Analysis & Reconstruction Inc., Advanced Crush For Collision Analysis (3/5-9/2012)

Crush energy analysis, damage, and energy applications for Collision reconstruction using "crush" (40 hrs)

2011

36. Northwestern University, TAR 3 (11/28-12/2/2011)

Continuing instruction on modern collision reconstruction Including incorporation of statistical processes in determination Speed ranges (40 hrs)

37. Northwestern University, Crash Data Retrieval Specialist (7/11-15/2011)

Understanding and analysis of data retrieved from CDR and MCL units Regarding information for deployment events (40 hrs)

2010

38. Northwestern University, Motorcycle Crash Reconstruction (10/11-15/2010)

Analysis of evidence from motorcycle crashes including the analysis Of friction factors found during slide tests (40 hrs)

39. Post Blast Investigation (06/22-24/2010)

Analysis of evidence from post blast material to determine means and methods, taught by ATF (24 hrs)

2009

40. Northwestern University, TAR 2 (12/07-11/2009)

Advanced Analysis of Evidence During Traffic Collision Reconstruction. (40 hrs)

41. Northwestern University TAR 1 (11/09-20/2009)

Expert Aspects of Motor Vehicle Collisions, and How to Reconstruct Collisions Based on Evidence. (80 hrs)

42. Salt Lake County Sheriff's Office (10/26-30/2009)

Advanced Traffic Collision Investigation. Speed Analysis, Damage Analysis, and Speed Calculation According to Tire Marks. (40 hrs)

43. Utah Highway Patrol (06/15/2009)

Occupant Kinematics Understanding how occupants move post collision (8 hrs)

44. Utah Highway Patrol (3/16-19/2009)

Photogrammetry. Collision Scene Mapping and Diagraming. (32 hrs)