

VANNI ROA

PE

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TRAFFIC ACCIDENT RECONSTRUCTION

EDUCATION

THE COLLEGE OF NEW JERSEY

BS Mechanical Engineering 2021

LICENSES & CERTIFICATIONS

Professional Engineer MI
Certified Crash Data Retrieval (CDR)
Technician and Analyst
Certified Remote Pilot (Part 107)

AFFILIATIONS

SAE International
American Society of Mechanical Engineers

PROFESSIONAL PROFILE

Mr. Vanni Roa is a Senior Engineer at Explico. Mr. Roa's area of practice involves the investigation and reconstruction of vehicle collisions. He holds a BS in Mechanical Engineering from The College of New Jersey. Mr. Roa is a licensed engineer in the state of Michigan. During Mr. Roa's undergraduate studies, he gained proficiency in 3D Modeling and Finite Element Analysis for mechanical design. For his senior capstone project, he designed and prototyped a solar desalination system geared toward providing clean water for developing countries. Prior to Explico, Mr. Roa gained quality control, design, and assembly experience in the manufacturing industry.

At Explico, Mr. Roa supports the Accident Reconstruction team by reviewing incident-related documents, conducting inspections, and leading the analysis of vehicle collisions. He has investigated hundreds of vehicle collisions, which have included pedestrians, bicycles, motorcycles, passenger vehicles, and commercial vehicles. He has conducted event data recorder (EDR) downloads of passenger vehicles and commercial vehicles. He utilizes 3D modeling and simulation software to reconstruct accidents in virtual environments.

AREAS OF EXPERTISE

Evidence Documentation
Laser Scanning
Vehicle Accident Dynamics
Vehicle Damage Analysis
Accident Reconstruction Simulation

EXPERIENCE

Explico

2026 - Present	<i>Senior Engineer</i>
2025 - 2026	<i>Senior Scientist</i>
2023 - 2024	<i>Scientist</i>
2022 - 2023	<i>Associate Scientist</i>

TBK Lambda-Americas

2021 - 2022	<i>Mechanical Engineering Intern / Assembler</i>
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Aerospace Manufacturing Inc.

2021	<i>Quality Engineering Intern</i>
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PROFESSIONAL DEVELOPMENT

Society of Automotive Engineers

Accessing and Interpreting Heavy Vehicle Event Data Recorders, June 2026, Appleton, WI
Reconstruction and Analysis of Rollover Crashes of Light Vehicles, April 2026, Virtual Online
Vehicle Dynamics for Passenger Cars and Light Trucks, May 2025, Troy, MI
Applying Automotive EDR Data to Traffic Crash Reconstruction, October 2024, Marina Del Rey, California
Vehicle Crash Reconstruction: Principles and Technology, October 2023, Denver, CO

Photogrammetry

PhotoModeler for Collision Investigation, September 2024, Virtual Online

Recon-3D

Recon-3D Training Course, February 2023, Virtual Online

Northwestern University Center for Public Safety

Crash Data Retrieval System Operators Course, May 2022, Chicago, IL