

VANNI ROA

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**TRAFFIC ACCIDENT
RECONSTRUCTION**

EDUCATION

THE COLLEGE OF NEW JERSEY

BS Mechanical Engineering 2021

LICENSES & CERTIFICATIONS

Certified Remote Pilot (Part 107)
Engineer-in-training (EIT) 2021

AFFILIATIONS

SAE International
American Society of Mechanical Engineers

PROFESSIONAL PROFILE

Mr. Vanni Roa is a Senior Scientist 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 and an EIT Certification. 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 Third World 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 assisting in the analysis of vehicle collisions. He utilizes 3D modeling and simulation software to reconstruct an accident in a virtual environment. He also applies fundamental physics principles to analyze vehicle dynamics and damage after a collision. Mr. Roa is actively studying cutting edge scientific literature and pursuing newly relevant methods in Accident Reconstruction.

AREAS OF EXPERTISE

- Root Cause Analysis
- Evidence Documentation
- Laser Scanning
- Vehicle Accident Dynamics
- Vehicle Damage Analysis
- Accident Reconstruction Simulation



EXPERIENCE

Explico

2025 - Present *Senior Scientist*
2023 - 2024 *Scientist*
2022 *Associate Scientist*

TBK Lambda-Americas

2021 - 2022 *Mechanical Engineering Intern / Assembler*

Aerospace Manufacturing Inc.

2021 *Quality Engineering Intern*

PROFESSIONAL DEVELOPMENT

Society of Automotive Engineers

Applying Automotive EDR Data to Traffic Crash Reconstruction, October 22-24, 2024, Marina Del Rey, California
Vehicle Crash Reconstruction: Principles and Technology, October 2-4, 2023, Denver, CO

Photogrammetry

PhotoModeler for Collision Investigation, September 9-12, 2024, Virtual Online

Recon-3D

Recon-3D Training Course, February 25, 2023, Virtual Online

Northwestern University Center for Public Safety

Crash Data Retrieval System Operators Course, May 12-13, 2022, Chicago, IL