



CURRICULUM VITAE
BROOKE E. MCKINNEY

EDUCATION

2023 – 2024	MS	COLORADO SCHOOL OF MINES – GOLDEN, COLORADO College of Engineering Mechanical Engineering Specialty – Biomechanics
2019 – 2023	BS	COLORADO SCHOOL OF MINES – GOLDEN, COLORADO College of Engineering Mechanical Engineering Minor – Biomechanical Engineering

PROFESSIONAL EXPERIENCE

2023 – DATE	VECTOR SCIENTIFIC, INC. <i>Biomechanical Engineer / Research and Testing</i> <i>Biomechanics</i> Injury biomechanics investigation, analyses, and reconstruction of motor vehicle accidents including low-speed and high-speed crashes involving frontal, rear-end, lateral, sideswipe, and rollover collisions; injury biomechanics analyses involving human dynamics and injuries in sport/recreation, and industrial/occupational accidents; research and application of large-scale data processing and statistical analyses of a national vehicle crash database for occupant injury outcomes and trends.
2023	VECTOR SCIENTIFIC, INC. <i>Biomechanical Engineer Intern</i> Spearheaded research project conducting large-scale data processing and statistical analyses of a national vehicle crash database for occupant injuries in side impacts and to determine effectiveness of airbag deployment in single-event side impacts.
2021	TALLGRASS ENERGY PARTNERS <i>Asset Integrity Engineer Intern</i> Collected and analyzed field data to find pipeline anomalies caused by internal and/or external corrosion.

LICENSES AND CERTIFICATIONS

- 2024 / May FINITE ELEMENT ANALYSIS (FEA), GRADUATE CERTIFICATE
Colorado School of Mines
- 2024 / Mar. FUNDAMENTALS OF ENGINEERING (FE), MECHANICAL LICENSE
National Council of Examiners for Engineering and Surveying

RESEARCH AND TESTING

- 2023 – 2024 VECTOR SCIENTIFIC, INC.
Airbag Effectiveness in Side Impacts
- 2022 – 2023 COLORADO SCHOOL OF MINES HUMAN CENTERED DESIGN STUDIO
Senior Design Capstone Project – Electrical Stimulation Device
1st Place Overall Top Honors Award out of 74 teams.

CONFERENCES, SEMINARS, AND COURSES

- 2025 / Nov. 69th Stapp Car Crash Conference – Emory University, Atlanta, GA
- 2025 / Oct. National Highway Traffic Safety Administration – NHTSA Human Injury Research Division
53rd NHTSA Workshop on Human Subjects for Biomechanical Research
- 2025 / Oct. 69th Association for the Advancement of Automotive Medicine (AAAM) Annual Scientific Conference – Indianapolis, IN
- 2025 / Jun. University of Virginia Center for Applied Biomechanics and MOBIOs Lab at Universidad Pontificia Comillas – Comillas University, Madrid, Spain
9th International Advanced Course on Injury Biomechanics
- 2024 / Oct. 68th Stapp Car Crash Conference – The Ohio State University, Columbus, OH
- 2024 / Oct. National Highway Traffic Safety Administration – NHTSA Human Injury Research Division
52nd NHTSA Workshop on Human Subjects for Biomechanical Research
- 2024 / Sep. Society of Automotive Engineers
Injuries, Anatomy, Biomechanics & Federal Regulation
- 2024 / Jul. National Association of Professional Accident Reconstructionists (NAPARS)
Counterfeit Airbags – Crash Investigation and Reconstruction of Counterfeit Airbags and Non-Genuine Component Parts

PROFESSIONAL MEMBERSHIPS

- Society of Automotive Engineers (SAE)
Association for the Advancement of Automotive Medicine (AAAM)