CV / Resume for: Austin D. Semmel
566 Connor Loop, Apartment A, West Point, NY 10996
Cell: 484-707-3844; austin.semmel@westpoint.edu; austinsemmel@gmail.com

Education

United States Military Academy at West Point (Class of 2015)
Bachelor of Science in Economics

- Statistical/Quantitative Concentration
- Systems Engineering Specialization

University of South Carolina (2016)
Master's Certificate in Advanced Business Analytics

United States Army (2018-2021)

- Lean Six Sigma Green Belt Certification
- Lean Six Sigma Black Belt 40 Hour Course

Massachusetts Institute of Technology (2021)
Graduate Certificate in Machine Learning

Oxford University (2022)
Graduate Certificate in Blockchain Strategy

North Carolina State University (Aug 2017 – Present)
Master of Statistics (Class of 2019)

- Statistical Inference, machine learning, and data visualization
- Frequentist and Bayesian (parametric and non-parametric) modeling in R

Master of Operations Research (2024)

PhD Candidate—Operations Research (2022-Present)

- Dissertation Topic: US Army Aviation Operational Readiness Policy Analysis
- Neural Networks and their applications to decision support systems
- Linear programming and stochastic modeling for policy advising

CV / Resume for: Austin D. Semmel
566 Connor Loop, Apartment A, West Point, NY 10996
Cell: 484-707-3844; austin.semmel@westpoint.edu; austinsemmel@gmail.com

Academic Work

Teaching Experience

United States Military Academy at West Point (2024-Present)

- MA103: Mathematical Modeling & Introduction to Calculus (3 Sections)
- MA206: Probability and Statistics (8 Sections)

Research Advising

- MA289: Cadet Ian Smith '28, NORAD Data Visualization
  - AY25-2
- MA389: Cadet Kristian Nordby, LLMs for Querying Tabular Data
  - AY25-1, AY25-2
- MA489: Cadet Ethan Collins, Continuous Glucose Monitoring
  - AY25-1, AY25-2, AY26-1
- MA389: Cadet Jackson McCray, Linear Programming for Aircraft Mission Scheduling
  - AY26-1
- MA489: Cadet Mark Amori, Explainability of Computer Vision Algorithms for Riot Detection from Satellite Imagery
  - AY 26-1

Publications

- Semmel AD, Heese HS, McConnell BM. Evaluating the implementation of operational readiness and maintenance policies in US Army aviation. The Journal of Defense Modeling and Simulation: Applications, Methodology, Technology. 2025;0(0). doi:10.1177/15485129251328044

Conference Presentations

- 61st Army Operations Research Symposium (September 12 – 14, 2023)
  - Tradeoffs in Army Aviation Training and Maintenance
- 2023 INFORMS Annual Meeting (October 13 – 18, 2023)
  - Tradeoffs in Army Aviation Training and Maintenance
- 93rd Military Operations Research Symposium (9 – 12 June 2025)
  - GC26. Semmel, A.*, Heese, H.S., McConnell, B., & Rachunok, B. 2025. A Framework for Analyzing Operational Efficiency in US Army Aviation: Self-Organizing Map-based Clustering of Flight Dispatch Decisions. Annual Symposium of the Military Operations Research (MORS), Leesburg, VA. Selected "Best in Working Group: Readiness."

US Army Professional Work

- Evaluating the Economic Viability of 8th Military Police Brigade's Nuclear, Biological, Chemical, Reconnaissance Vehicle (NBCRV) Program
  - https://github.com/defense031/NBCRV_8MP/blob/main/NBCRV_White Paper.pdf