

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)

Doctor of Philosophy, Operations Research (2026)

- Dissertation: The Readiness–Utilization Trade Space in U.S. Army Aviation
- Interpretable modeling frameworks for decision support in resource-constrained environments
- Optimization, generalized linear models, Bayesian inference, and simulation

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Work Experience

Second Lieutenant, US Army, Finance Officer

Executive Officer, Alpha Detachment, 82nd Financial Management Support Unit
(October 2015 – November 2016)

- Execute administrative tasks essential to maintaining unit readiness

General Fund Enterprise Business System Tier II Support Team
(April 2016 – November 2016)

- Research and resolve trouble tickets in the Army's ERP System, a customized SAP program called GFEBS (General Fund Enterprise Business System)

First Lieutenant, US Army, Finance Officer

Officer in Charge, Forces Command Headquarters, G8 Financial Management
Support Operations Center
(November 2016 – June 2017)

- Directly responsible for 13 Soldiers, including two Senior Staff Sergeants

Executive Officer, HHC, 1BN, 1st Special Warfare Training Group (Airborne)
(June 2017 – July 2018)

- Advises Commander on legal, moral, and ethical execution of a \$6M budget for over 300 personnel in support of Special Operations Forces Assessment and Selection

Captain, US Army, Finance Officer and Operations Research / Systems Analysis Officer
Headquarters Deputy Comptroller, United States Army Special Operations
Command (July 2018 – July 2019)

- Support the execution of a \$200M budget at the three-star Command level
- Provide fiscal guidance, analysis, and planning by using data to forecast future expenses for 34 different staff directorates within the headquarters

Brigade S8, Resource Manager, 8th Military Police Brigade
(December 2019 – September 2021)

- Fund and resource valid requirements for a Brigade sized element of 1,100+ Soldiers and a budget of \$5.2M in the Indo-Pacific Area of Responsibility
- Provide guidance and analysis in reference to Fiscal Law, spending execution trends, and forecast upcoming costs

Operations Research and Systems Analysis Officer, 25th Infantry Division
Headquarters (October 2021 – August 2022)

- Project-based work involving statistical and financial models

Instructor, United States Military Academy at West Point, Department of
Mathematical Sciences (July 2024 – February 2026)

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Major, US Army, Operations Research / Systems Analysis Officer
Instructor, United States Military Academy at West Point, Department of
Mathematical Sciences (March 2026 – Present)

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 (10 Sections)
- MA376: Applied Statistics (One Section)

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, AY26-2
- MA389: Cadet Jackson McCray, Linear Programming for Aircraft Mission Scheduling
 - AY26-1, AY26-2
- MA489: Cadet Mark Amori, Explainability of Computer Vision Algorithms for Riot Detection from Satellite Imagery
 - AY 26-1, AY26-2

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.”

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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
- austinsemmel.com