

Operations Researcher / Data Scientist CV

Neil Kester, PMP, DASSM

9/9/24

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Operations Research / Systems Analyst

Gazzo, Padua Italy

Email: neilkester@yahoo.com | LinkedIn: linkedin.com/in/nkester

Professional Summary

Experienced Data Scientist with a strong background in statistical analysis, machine learning, and data visualization. Proven ability to translate complex data into actionable insights.

Work Experience

Senior Data Scientist

Tech Solutions Inc. | City, Country | January 2020 - Present

- Led a team of data scientists in developing predictive models to improve customer retention by 20%.
- Implemented machine learning algorithms to analyze large datasets, resulting in a 15% increase in operational efficiency.
- Collaborated with cross-functional teams to identify business opportunities and provide data-driven solutions.

Data Scientist

Data Insights LLC | City, Country | June 2016 - December 2019

- Developed and deployed recommendation systems that increased product sales by 25%.
 - Conducted A/B testing and analyzed results to optimize marketing strategies.
 - Created interactive dashboards and reports using Tableau and Power BI to visualize key performance indicators.
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Education

Master of Science in Systems Engineering, MS

Johns Hopkins University Whiting School of Engineering | Baltimore, MD USA | 2017 - 2021

- Coursework: .
- Thesis: “=”.

Master of Science in Engineering Management, MS

Missouri University of Science & Technology (MS&T) | Baltimore, MD USA | 2010

- Coursework: .
- Thesis: “=”.

Bachelor of Science in Civil Engineering, BS

United States Military Academy | West Point, NY USA | 2002 - 2006

- Coursework: .
 - Capstone Project: ““.
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Skills

Programming Languages:

- **R:** Expert
- **SQL:** Intermediate
- **Python:** Intermediate

Data Analysis:

- Pandas, NumPy, Scikit-learn, TensorFlow

Data Visualization:

- Matplotlib, Seaborn, Tableau, Power BI

Tools & Technologies:

- Hadoop, Spark, AWS, Docker

Soft Skills:

- Analytic Thinking, Problem Solving, Communication, Team Leadership

Projects / Studies

U.S. Special Operations Command (USSOCOM) Operational Assessments

USSOCOM | 2018

- Led a team to conduct operational design and an operational assessment of a complex Combined, Joint, Interagency Operation. The focus of this effort was to develop the framework and collect the information required to better define and structure future operations.

Trans-Regional Analysis Validation ENvironment (TRAVERN)

USSOCOM | 2018

- The TRAVERN is a methodology and tool developed to replicate and automate the workflow required to transform large sets of semi-structured captured enemy material into cleaned, structured, and related data. The output of this tool transformed what had taken analysts days to accomplish into seconds, giving them time to develop more complete understanding.

Communications Interoperability appraisal Table (CIRCult)

Center for Army Analysis (CAA) | 2017

- This study developed a novel approach to collecting, storing, and communicating the U.S. Army's ability to communicate with its Combined, Joint, and Interagency Mission Partners. Structured around the Warfighting Functions and U.S. Army echelons, it connects observations from units operating with mission partners to a structured and searchable database. This allows other operators to learn from those observations and provides a holistic view to senior leaders on what level of interoperability can be expected between two organizations.

Fuel Resupply to Eastern Europe Distribution Overland Model (FREEDOM)

CAA | 2016 - 2017

- This study focused on developing a discrete event simulation model that approximated the processes and limitations required to transfer fuel overland to support operations across Europe. The desired output was to understand what level of transportation resources, environmental conditions, and/or physical infrastructure was required to meet the anticipated demand at the correct time and location.

Small Arms Ammunition Configuration Study (SAAC)

Army Materiel Systems Analysis Activity (AMSAA) | 2014 - 2016

- This critical study, led by the Maneuver Center of Excellence (MCoE), aimed to evaluate the required performance and technical feasibility of the next generation of the Soldier Rifle. This highly collaborative study included engagement from MCoE, AMSAA, TRAC, ARL, ARCIC, ARDEC, NATICK, USMA, and others. To support this, I developed the combat modeling scenarios used to evaluate the system designs and developed data analysis tools to access, analyze, and visualize the modeling output results.

Discrete Event System Specification Distributed Modeling Framework (DEVS-DMF)

AMSAA | 2015 - 2016

- This study, in collaboration with the United States Military Academy's Systems Engineering Department, explored the possibility of deploying models representing individual aspects of a combat simulation model (the act of acquiring a target, the delivery accuracy of a small arms weapon, the effects of that projectile on a target, etc.) remotely in a cloud environment. Executing this in a DEVS environment allows the models to run independently of each other and leverage significantly more computing power than is resident on a local machine. Leveraging frameworks such as these, paired with advanced Design of Experiment techniques, allow analysts to explore the most important regions of the design space.

Collateral Damage Estimation (CDE) Program

AMSAA | 2015 - 2016

- Under the Joint Technical Coordinating Group for Munitions Effectiveness (JTTCG/ME) Program Office, I ran the models and analysis to update CDE tables for new or updated ground to ground munitions. I also participated in the CDE Working Groups to develop modeling improvements that strove to balance the flexibility desired by operators with the risk mitigation measures provided by the CDE methodology.

Echelons Above Brigade (EAB) M113 Replacement Analysis of Alternatives

AMSAA | 2015 - 2016

- This study, led by the TRADOC Analysis Center (TRAC), evaluated viable alternatives to the M113 to support Field Artillery and Engineer units at Echelons Above Brigade (EAB). The AMSAA Mobility and Survivability teams evaluated each candidate's performance and provided that feedback to TRAC to combine with their results of combat modeling performance. I provided experiential knowledge on the platforms and requirements specific to the U.S. Army Combat Engineer Military Occupational Specialty (MOS)

Certifications

- **Project Management Professional (PMP)** - Project Management Institute, MAR 2014 - MAR 2026
 - **Disciplined Agile Senior Scrum Master (DASSM)** - Project Management Institute, JUL 2024 - JUL 2025
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Conference Presentations

- **“Overland Fuel Distribution Model”**, Military Operations Research Symposium (MORS), JUN 2017
 - A talk to describe and demonstrate our approach to the FREEDOM model.
 - **“Cloud Based Distributed Modeling Framework”**, Army Operations Research Symposium (AORS), OCT 2015
 - Presented the approach and value of Distributed Modeling in the context of weapons performance modeling.
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Published Articles

- R. Kewley, N. Kester and J. McDonnell, “DEVS Distributed Modeling Framework - A parallel DEVS implementation via microservices,” 2016 Symposium on Theory of Modeling and Simulation (TMS-DEVS), Pasadena, CA, 2016, pp. 1-8.
 - This article introduces the Discrete Event System Specification Distributed Modeling Framework (DEVS-DMF) for integrating simulation modes as parallel and distributed microservices. Two simulation implementations of DEVS-DMF discussed in this article include a parallel simulation test case and a combat weapons simulator that assesses the performance of alternative small arms weapons designs.
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References

Available upon request.