

Kristopher Bosch

Data Scientist / Machine Learning Practitioner

 [Portfolio](#)



<https://www.linkedin.com/in/kristopher-bosch/>



Clearance: SECRET

I have spent the past nine years working in Air Force Special Warfare. I am experienced in leading multidisciplinary teams within fast-paced, high-performance environments, and I enjoy using data and technology to solve problems and help meet the goals and objectives of individuals and organizations.

EXPERIENCE

Director of Physical Medicine

Department of Defense, United States Air Force | Sept 2022 - Current

58th Rescue Squadron, Nellis AFB, NV

- Leading the management and operation of a multidisciplinary Human Performance Optimization Flight, ensuring availability of PJ/CRO personnel valued at ~\$70 million in support of the Guardian Angel Weapon System.
- Collect, process, and create visualizations and reports of human performance metrics/KPIs related to performance, health, and force readiness using Python, Microsoft Excel, and Microsoft PowerPoint for presentation to the command staff.
- Manage a \$120,000 Flight budget; Enhance the human performance and sports science capabilities of our HPO program through effective vendor outreach and procurement of cutting-edge technologies and equipment.
- Deliver superior clinical care, injury prevention, post-surgical rehabilitation, and performance enhancement services to 70 Special Operators and 110+ Combat Support personnel to achieve and maintain > 96% squadron readiness.
- Maintain the Human Performance database for tracking injuries, encounters, and service utilization; measure human performance metrics/KPIs and provide analysis and visualizations for Command Staff review.

Technical Analyst

AFWERX Traditional Fellowship | Sept 2023 – June 2024

Assigned to the AFVentures Division, Open Topic Team:

- Participated as a Technical Evaluator for multiple Phase 1 Open topic SIBR/STTR and Phase 2 Direct-to-Phase-2 (D2P2) Cycles. Assessed the technical feasibility and viability of proposals, conducting technical due diligence to evaluate their potential impact on Air Force operations:
- Completed 29 Technical Evaluations representing \$2.44M in potential R&D work; placed in the top 1% of augmentee evaluators by number of proposals evaluated.
- Assisted with data analysis and algorithm development for the processing of evaluator data and matching evaluators to proposals using NLP algorithms to ensure proposals were reviewed by the most qualified evaluators.
- Assisted in refining data collection tools and data cleaning processes; created data pipelines; generated reports and insights to inform decision-making and strategy refinement.
- Collaborated as part of a cross-organizational team between AFWERX and NASA to identify duplicate lines of effort between the two organizations in the SIBR/STTR programs.

EDUCATION

Colorado State University-Global Campus

Master of Science (M.S.) Artificial Intelligence and Machine Learning

Aurora, CO

April 2022

State University of New York at Buffalo

Doctor of Physical Therapy (D.P.T.) Physical Therapy

Buffalo, NY

May 2004

State University of New York at Buffalo

Bachelor of Science (B.S.) Exercise Science/Athletic Training

Buffalo, NY

May 1999

SKILL DEVELOPMENT PROJECTS

Hamstring Injury and Performance

- Analysis of a dataset of 65 professional baseball players, which included demographics, performance testing using NordBoard and Single-Leg Isometric Bridge, and whether a player sustained a hamstring injury in that season.
 - Published to: <https://www.drkristopherbosch.com/hamstring>
 - Skill focus: Data analysis, data cleaning, application of descriptive statistics, application of machine learning algorithms (utilized Logistic Regression and Decision Tree), data visualization.

Building a Basic Facial Recognition Program

- This mini-project was one of the first assignments in the Introduction to Neural Networks course, which was part of my master's degree curriculum. The instructions for the assignment were to take an image with one or more people in it and build a facial recognition program that would draw red bounding boxes around the faces it identified.
 - Published to: <https://www.drkristopherbosch.com/basic-facial-recognition>
 - Skill focus: Python, OpenCV, Pillow, Face Recognition Library

CERTIFICATIONS

- Project Management Certification – Google
- Data & AI Product Management – High ROI Data Science
- Strategic Executive Leadership Certification – High ROI Data Science
- Data and AI Technical Strategist Certification – High ROI Data Science
- IBM Data Science Professional Certificate
- Machine Learning Specialization - Stanford University & DeepLearning.AI
- Data Analytics Accelerator
- Artificial Intelligence Foundations – Lincoln Laboratory, Massachusetts Institute of Technology
- Data Science Fundamentals with Python and SQL
- Johns Hopkins University Executive Data Science Specialization

SKILLS & TOOLS

Data Analytics, Data Visualization, Machine Learning, Deep Learning, Python, SQL, Tableau, Excel, Tensorflow, Keras, Docker, GCP, AWS, NLTK, OpenCV, Hugging Face