Cassidy K. Buhler, Ph.D.

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Education

2024 **Drexel University** Philadelphia, PA
Ph.D. Operations & Business Analytics, *Computational Data Science Minor*

2019 **University of Utah** Salt Lake City, UT
B.S. Mathematics, *Statistics Emphasis*

Employment

Doctoral Research Fellow 09/2019 – 06/2024
Drexel University | Department of Decision Sciences & MIS

- Led research projects that applied operations research and optimization methodologies to tackle challenges in machine learning and biodiversity conservation.
- Served as an instructor and TA for 25+ undergraduate and graduate (MBA, Executive MBA, PhD) courses across various disciplines (statistics, business analytics, operations research, operations management, MIS).
- First-authored 5 papers (2 published, 1 under review, 2 in preparation) and delivered presentations at 8 conferences; Earned 2 student-nominated teaching awards and course evaluation scores above department/college averages.

Research Assistant 08/2018 – 08/2021
University of Utah | Department of Mathematics

- Collaborated on an interdisciplinary team to better understand the response of castration-resistant prostate cancer under various treatment regimens.
- Formulated mathematical models with differing mechanism complexity to simulate biological dynamics of prostate cancer; Evaluated modern treatment regimens under this scheme.
- First-authored a journal publication to disseminate findings to academic and medical audiences.

Computer Scientist (Intern) 05/2018 – 08/2018
United States Air Force | Hill Air Force Base

- Conducted research related to improving software for USAF aircraft in the Software Engineering Group.
- Executed data analysis, cluster analysis, and data visualization; Presented and delivered insights to team leadership.

Skills

Programming

Language	*Libraries/Packages/Toolboxes*
Python	PyTorch | TensorFlow | Pandas | BeautifulSoup | scikit-learn | Keras | Seaborn | Google Earth Engine
R	tidyverse | ggplot | rgdal | raster | rgeos | SDMTools | deSolve
MATLAB	Deep Learning | Statistics & Machine Learning | Optimization | Financial | Computer Vision

Optimization Software

Software	*Applications*
GUROBI	Quadratic Programming | Linear Programming
Pyomo	Mixed-Integer Nonlinear Programming | Derivative-Free Optimization
CVX	Convex Optimization
CPLEX	Integer Programming | Linear Programming
AMPL	Nonlinear Programming

Coursework

Subject	*Courses*
Comp Sci	Data Structures & Algorithms | Deep Learning | AI | Machine Learning | Data Mining
Data Science	Data Acquisition & Pre-Processing | Data Analysis & Interpretation
Statistics	Statistical Inference | Multivariate Analysis | Time Series Analysis
Applied Math	Nonlinear Programming | Linear Programming | Stochastic Optimization | Math Econ | Game Theory