

Martin Skarzynski

BIostatistics · Data Science · Epidemiology · Genomics · Machine Learning · Pharmacometrics · Public Health · Software Engineering

240-595-3460

mskar@dr.com

mskar.github.io

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Summary

My primary research interest is in understanding health risk factors by combining scientific expertise from diverse fields with machine intelligence. I believe I am uniquely equipped to bridge the gaps between scientific disciplines and deliver on the promise of data science in health research. My preferred tools are R and Python, open source programming languages kept on the cutting edge by their active and supportive communities. Through research and teaching, I am constantly improving my ability to obtain, tidy, explore, transform, visualize, model, and communicate data. I aim to utilize my technical skills and science background to become a leader among the next generation of multidisciplinary data scientists.

Recent Experience

Lead Scientist

BOOZ ALLEN HAMILTON

October 2019 - Present

- Translates Subject Matter Expertise into Python and R code
- Engineers machine learning algorithms, probabilistic models, and statistical inference tools
- Writes tests to ensure model validity and code reliability
- Uses git version control to track and manage changes to code, tests, and documentation
- Mines data by web scraping and via Application Programming Interfaces
- Orchestrates data transformation pipelines
- Determines optimal algorithmic approach through iteration and experimentation
- Uses Docker and Conda to ensure reproducibility and reliable deployments
- Designs SQL queries for improved database querying efficiency
- Prototypes new applications using Django, Flask, Plotly Dash, and R Shiny
- Builds dashboards products to display data and model outputs
- Develops, maintains, reviews, and refactors Python, Shell, R, and JavaScript code
- Coordinates model and dashboard code deployment via Amazon Web Services
- Communicates results using compelling static and interactive plots
- Leverages broad scientific and technical expertise to deliver rigorous analyses
- Employs the latest technologies and best practices in data science and software engineering projects
- Keeps stakeholders informed with parametrized reports written using Jupyter notebooks and R Markdown
- Creates applications to make analyses accessible to non-technical audiences
- Leads multidisciplinary COVID-19 statistical modeling effort

Lead Instructor

DATA SOCIETY

October 2018 - Present

- Teaches courses such as:
 - Classification
 - Data Science Bootcamp
 - Text mining
 - R Programming
 - Data Science Academy
 - Python Programming

GENERAL ASSEMBLY

July 2019 - Present

- Teaches courses such as:
 - Data Science 5000
 - Tech Excellence Data Science
 - Data for Leaders
 - Python Programming

Treasurer

DATA COMMUNITY DC

April 2020 - Present

- Manages the finances of a non-profit organization that supports [eleven Meetup groups](#)

Cancer Prevention Fellow

BIostatistics Branch, Division of Cancer Epidemiology and Genetics, National Cancer Institute

June 2017 - April 2021

- Integrated clinical, laboratory, epidemiologic, genomic, and medical imaging data
- Combined deep learning and statistical inference using stacked ensembles

Bioinformatics and Data Science Department Co-Chair

FOUNDATION FOR ADVANCED EDUCATION IN THE SCIENCES

January 2014 - May 2020

- Co-administered an academic program with over twenty faculty members
- Taught three graduate data science courses:
 - Introduction to Python
 - Introduction to Text Mining
 - Applied Machine Learning
- Taught nine graduate biotechnology workshops:
 - Pharmacometric Analyses using R
 - Recombinant DNA Methodology
 - Cellular Immunology
 - Junior Scientist Training Program
 - Research Tools for Studying Disease
 - Genetics Institute
 - Immunochemistry and Antibodies
 - Cancer Prevention
 - Flow Cytometry

Course Developer

DATA CAMP

October 2018 - Present

- Developed an online course called [Creating Robust Python Workflows](#) (part of Coding Best Practices track)

Postdoctoral Fellow

ONCOGENOMICS SECTION, GENETICS BRANCH, NATIONAL CANCER INSTITUTE

July 2015 - June 2017

- Conducted genomic analysis of immune and cancer cells
- Developed and tested immunotherapeutic agents
- Mentored a trainee from the NIH High School Scientific and Training Enrichment Program

Adjunct Professor

GEORGE WASHINGTON UNIVERSITY

January 2015 - May 2015

- Taught two undergraduate biotechnology workshops:
 - Biology of Organisms
 - Women and Leadership

Predoctoral Fellow

NATIONAL INSTITUTES OF HEALTH

July 2009 - May 2015

- Tested kinase inhibitor and monoclonal antibody therapeutic efficacy and drug interactions
- Engineered and assayed therapeutic immunotoxins
- Quantified cancer cell signaling pathways
- Mentored a trainee from three different NIH training programs:
 - Summer Internship Program
 - Medical Research Scholars Program
 - Biomedical Research Training Program for Individuals from Underrepresented Groups

Education

MPH, Epidemiologic and Biostatistical Methods for Public Health and Clinical Research

JOHNS HOPKINS UNIVERSITY SCHOOL OF PUBLIC HEALTH

May 2018

- Data Science Certificate

PhD, Tumor Biology

GEORGETOWN UNIVERSITY-NIH GRADUATE PARTNERSHIPS PROGRAM

May 2015

- Teaching Certificate

MS, Biotechnology

JAGIELLONIAN UNIVERSITY

June 2009

BA, Biology

ST. MARY'S COLLEGE OF MARYLAND

May 2007

Awards

Trans-Fellowship Research Award

CANCER PREVENTION FELLOWSHIP PROGRAM

June 2019

Summer School on Modeling Immunology Scholarship

EMORY UNIVERSITY

May 2017

Cancer Research Training Award

NATIONAL CANCER INSTITUTE

November 2015

Fellows Award for Research Excellence

NATIONAL INSTITUTES OF HEALTH

June 2015

Director's Award

NATIONAL HEART LUNG BLOOD INSTITUTE

October 2014

Certificate of Appreciation

US STATE DEPARTMENT

July 2014

Best Poster Award

TARGETED ANTICANCER THERAPIES CONGRESS

March 2014

Certificate of Appreciation

ROCKVILLE SCIENCE CENTER

January 2014

Orloff Science Award

NATIONAL HEART LUNG BLOOD INSTITUTE

January 2014

Intramural Research Training Award

NATIONAL INSTITUTES OF HEALTH

February 2012