

# Kerry J. Martin, Ph.D.

## Data Scientist & Physiologist

Call/Text: (919) 971-9675 | Chapel Hill, NC

[Email](#) | [LinkedIn](#)

## Experience

### Biostrap USA

*Director of Science* (Mar 2022 - Present)

- Design and execute internal studies utilizing raw PPG and IMU data
- Working with the data science team to create new products using machine-learning & statistics.
  - Examples: Menstrual cycle detection using *only* biometrics; heart failure risk and related biometric development; postural transition detection using IMU data; COVID detection.
- Development of statistical tools, dashboards, and data pipelines to facilitate Biostrap Labs autonomy.
- Facilitate sales and partnerships with scientifically-oriented clients.

*Research Physiologist* (Apr 2021 - Mar 2022)

- Directing research operations for Biostrap Labs, the contract research arm.
- Investigating novel biometric behavior at the population-level.
- Investigating population-wide data insights for product development, marketing, & scientific research.

### University of North Carolina at Chapel Hill & Greensboro

*Research & Teaching Assistant* (Aug 2014 - May 2021)

- Project lead for 6 research studies; average team size of 5 (graduate and undergraduate level).
- Coordinated research subjects, data acquisition, supplies management, & protocol development.
- Applied human physiology research & basic animal/cell model research.
- 7 years teaching undergraduate Exercise Physiology labs and lectures

## Education

Ph.D., Exercise Physiology

University of North Carolina at Greensboro

2021

*Research Focus: Exercise, Oxidative Stress, Cell Signaling (murine models)*

M.A., Exercise Physiology

University of North Carolina at Chapel Hill

2016

*Research Focus: Mathematical Modeling of Physiological Responses to Cycling*

B.S., Health & Exercise Science, with honors

Wake Forest University

2013

*Research Focus: Running Biomechanics and Injuries*

# Kerry J. Martin, Ph.D.

## Data Scientist & Physiologist

Call/Text: (919) 971-9675 | Chapel Hill, NC

[Email](#) | [LinkedIn](#)

### **Skills and Projects**

#### Computational/Statistical Analyses

- Inferential statistics & machine-learning modeling (R, Python, SPSS, SAS)
  - Commonly using base R, scikit-learn, statsmodels, etc.
- Data Analysis, visualization, and presentation
  - Cleaning - tidyverse, pandas, datatable, etc.
  - Graphing tools - ggplot, matplotlib, seaborn, plotly
  - Dashboards building - R Shiny, Python Dash

#### Health and Fitness Wearables

- Extensive history working with sensor processed data
  - GPS, heart rate, beat intervals, accelerometry, SpO<sub>2</sub>
  - Algorithm development using above metrics
- Experience processing raw PPG, ECG, 6/9-axis IMU data
- Comparative analyses and benchmarking

#### Physiological Testing

- Extensive experience in metabolic (VO<sub>2</sub>), body comp., lactate, and HR testing
- Experience with 3D gait analysis, EMG, dynamometry, and goniometry
- Biochemical analyses (Western Blots, HPLC, ELISAs, Colorimetric, assay development)

#### Science Communication

- 6 journal articles
- 7 poster presentations (1 award)
- 4 public scientific white papers
- 1 book chapter
- Lay science reviews for Social Media team