Carey Baldwin

Data Scientist and Educator
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Professional Summary

Data scientist and educator with 15+ years of experience combining statistical expertise with innovative teaching methods. Proven track record of developing industry-aligned curricula, leading academic programs, and delivering data science solutions across education and business sectors. Expert in Python, R, and modern machine learning techniques with demonstrated success in both academic and commercial applications. Innovative, collegial, and self-motivated professional with a unique and relevant skill set in statistics and computing.

Core Competencies

- Program Leadership & Development
- Statistical Analysis & Research Design
- Machine Learning & Predictive Modeling
- Curriculum Development & Innovation
- Data Science Consulting
- Technical Education & Training

Professional Experience

Faculty Director of the Masters in Business Analytics Graduate Program

The Isenberg School, UMass Amherst | June 2023 - Present
- Serve as an instructor in the MSBA program, teaching advanced analytics courses to 100+ graduate students annually
- Lead strategic direction and program development through MSBA promotional and recruiting activities
- Coordinate and participate in MSBA-enrolled student activities
- Drive curriculum review, development, and assurance of learning
- Conduct strategic review and analysis of program and competitor programs

Lecturer in Operations and Information Management

The Isenberg School, UMass Amherst | September 2019 - Present
- Develop and teach industry-aligned courses in data science including classical statistics, introduction to Python programming, and data science for business at both the undergraduate and graduate levels

- Serve on committees as assigned by the operations and information management (OIM) department to advance ongoing efforts
- Oversee and mentor doctoral students teaching OIM courses with the aim of elevating the student learning experience
- Serve on search committees as assigned

Co-director of the Isenberg Insurance Academy

The Isenberg School, UMass Amherst | September 2022 - Present
- Increase student interest in and interaction with the insurance industry by facilitating collaboration between insurance industry partners and Isenberg instructors
- Secure funding from partner companies (3-year commitment of $100,000+) to support operations
- Plan and execute student case competitions, presentations, and networking events
- Coordinate the alignment of OIM and finance curricula with insurance industry-specific content and guest lectures
- Build and lead the Institute for Quantitative Analytics, a program offered to an elite cohort of student analysts

Data Scientist and CEO

Green Line Analytics, LLC | September 2010 - Present
- Provide personalized statistical consulting and dissertation support to graduate students pursuing research in a variety of disciplines
- Provide academic instruction in statistics, data analysis, and computing to students at all levels
- Conduct extensive statistical research projects that synthesize and analyze institutional data
- Create customized, professional documents and instructional videos to interpret statistical results
- Develop and maintain a website/blog detailing professional experiences and providing academic/technical resources

Data Science Instructor

Mass Mutual Data Science Development Program, Amherst, MA | June 2020
- Developed and taught a week-long intensive course introducing Python for data science to newly hired employees
- Quickly adapted courses for remote delivery using video lessons, conferencing, virtual collaboration tools, and online coding platforms

Director of Academic Technology

The Williston Northampton School, Easthampton, MA | August 2016 - August 2018
- Provided leadership and structured training to 60+ faculty members
- Designed and led training for students in Microsoft Office 365 programs
- Researched and beta-tested curricular technology programs

Statistics Instructor

The Williston Northampton School, Easthampton, MA | August 2013 - August 2018
- Developed curricula and taught Probability and Statistics to 60-70 students yearly
- Implemented flipped classroom model for differentiated instruction
- Built extensive archive of video lessons using screen-recording technologies
- Developed data science course using R statistical software
- Served as advisor to 4-7 students annually
- Wrote 8-22 college recommendations yearly

Previous Teaching Experience

Bellarmine Preparatory School, Tacoma, WA | August 2007 - May 2009
- Taught multiple levels of physics to 5 sections of 20-25 high school students
- Developed special curriculum for advanced Marine Science Program

Sacred Heart Cathedral Preparatory, San Francisco, CA | August 2002 - May 2007
- Taught AP Physics C, AP Statistics, and other math/science courses
- Led development of school's Advanced Placement program integration

Education

Master of Applied Statistics
Colorado State University, Fort Collins, CO | August 2012 - December 2016

Bachelor of Physics
Mount Holyoke College, South Hadley, MA | August 1998 - May 2002

Professional Training

Course Design Institute

Instructional Media Lab, University of Massachusetts | June 2024
- Selected for special workshop to adapt a high-demand course for online delivery
- Completed week-long program in online instructional material development
- Collaborated with instructional designer on undergraduate course design

AWS Machine Learning Program

The Coding School | July - August 2023
- Completed 2-week intensive program in machine learning techniques
- Developed expertise in big data management and AI automation

Applied Data Science Program

MIT Professional Education | May - August 2021
- Completed 8-week program in modern data science techniques
- Developed 6 comprehensive projects implementing advanced analytics
- Studied under leading MIT scholars in data science

Software Development

Lambda School | June 2018 - February 2019
- Completed 8-month full-time program in web-based software development
- Built front-end and back-end applications using JavaScript, Python, and C
- Developed expertise in database management with Express.js, Django, and GraphQL

Technical Skills

Data Science & Analytics

- R: Descriptive and inferential statistics, regression analysis, Bayesian modeling, spatial and time-series analysis, data mining (dplyr), data visualization (ggplot2), sampling, statistical functions, and algorithms
- Python: Data extraction and manipulation (Pandas, NumPy, Beautiful Soup), visualization (Matplotlib, seaborn), machine learning (scikit-learn), statistical modeling (statsmodels), neural networks, time-series analysis, recommendation systems
- Machine Learning: Classification, regression, neural networks, time-series analysis

Development & Database

- Web Development: JavaScript/React.js, HTML5, CSS3, Next.js
- Database Management: SQL, Django, Express.js, GraphQL
- Additional Tools: LaTeX, Git, AWS
- Frameworks: Bootstrap, Material UI, styled components

Research Projects and Publications

Published Research

Rodgers-Tonge, D., Wray, M., & Baldwin, C. (2023). Supportive Programs and Financial Aid: Measuring Their Impact on Retention of Blacks and Latinx College Students in the New England Region. *Journal of Business Diversity*, *23*(4).

Kamine, T. H, et al. (2020). "Decrease in Trauma Admissions with COVID-19 Pandemic." *Western Journal of Emergency Medicine*, 21(4).

Research Projects

- AP Grade Analysis (2017) - Institutional research analyzing student performance predictors
- Rice Bran Supplementation Study (2016) - Statistical analysis of infant nutrition outcomes
- Lyme Disease Research (2012) - Predictive modeling of disease occurrence
- Bootstrapping a Spatial Process (2011) - Literature review in statistical computing

Web Development Projects

- QuizTime (2019) - Adaptive quiz software using Next.js and GraphQL
- TrailTracker (2019) - Geolocation tracking interface in React.js
- Web Notes (2019) - Dynamic note-taking application
- Multi-User Text-Based Game (2019) - Interactive web application

Institutional Projects

- Surface Pro at Williston (2017) - Microsoft promotional video contribution
- Course Content Archive (2014) - Institutional Advancement Project
- EdTech Blog (2013-2018) - Instructional technology initiative

Recent Presentations

- "Business Applications with Python" - Hack(H)er413 Conference (2024)
- "Mitigating Algorithmic Bias in Healthcare" - Voices of Data Science Conference (2024)
- "The Power of the Digital Pen" - MassCue (2015)

Awards & Recognition

- Isenberg Teaching Excellence Award (2024)
- Teaching with Digital Technology Award (2023)
- Flexible Learning Fellow (2021-2022)
- Isenberg Teaching Fellow (2021-2023)
- Teaching with Digital Technology Award (2021)
- Cain Family Grant (2017)
- Northampton School for Girls Instructorship (2016)

Professional Memberships

- American Statistical Association
- Western Mass Statistics and Data Science
- Western Mass Developers
- National Council for Teachers of Mathematics
- Open Data Science Conference