Meet Inspirational Women in Statistics & Data Science

Kelly H. Zou

Editorial Board, Significance

Dr. Kelly H. Zou, PhD, PStat, ASA Fellow, is Senior Director and Analytic Science Lead, Real-World Data & Analytics at Pfizer Inc. Dr. Zou is an elected Fellow of the American Statistical Association and an Accredited Professional Statistician. Her research interests include healthcare policy, big data, and outcomes research.

How or why did you choose statistics as a career path/area of study?

Both mathematics and physics have led me to statistics and beyond. Luckily, these disciplines have laid a solid theoretical and methodological foundation for sound statistical practice and applications.

What inspires you about statistics and data science?

My doctoral research covered semi-parametric methods associated with the assessment and validation of classification accuracy, while my post-doctoral research focused on observational data analysis. This provided me with sophisticated and practical tools, enabling me to be a statistician, biomedical engineer, quantitative analyst, and data scientist. The tools may evolve, but the inquisitive nature, mathematical principles, and coding skills will take each of these roles far along a career path.

What challenges do women face in statistics and data science professions?

For female students to become a future generation of Statisticians and Data Scientists, providing early interests and scholarships in Science, Technology, Engineering, and Mathematics Program (STEM) is paramount. Opportunities for scientific internships are critical to gain real-world, hands-on experience, beneficial mentorship, and career development. Collaborative projects in the era of big data let women data scientists shine with their talents.

What is the most exciting thing about your job and what does a typical day involve?

My days involve interacting with talented team members with multiple functions. This includes analytic scientists, data scientists, statisticians, programmers, cross-functional stakeholders such as outcomes researchers, medical and clinical colleagues, epidemiologists, payer insight analysts, and liaisons and collaborators with other organizations.

What would you say to girls in school/college who may be considering statistics or data science as a study option/career choice?

Statisticians and data scientists nowadays have wide backgrounds and sharp minds, who are keen observers. Besides such necessary characteristics for success, it is helpful to master “hard” toolsets such as quantitative training, mathematical training, computer languages, and coding skills. “Soft” skills, such as communication, identifying customers’ needs and translating them into quantifiable and actionable results, are also keys to a successful career.

Do you think the perception of statistics or data science as a male-dominated career can be changed, and if so, how?

1. Being imaginative, inquisitive and creative for the 4 V’s of data;
2. Expanding horizons to include subject-matter expertise areas;
3. Gaining hands-on experience in hardware and software development;
4. Understanding the policies and challenges for data access and analysis.

There is no “one size fits all” with becoming successful data scientists, but these useful skillsets can set the candidates apart and make them shine, regardless of gender.

Tell us your story
#inspirationalstatisticians

WILEY

260302