

Sheila Braun's Professional Skills

Soft Skills

- Integrity
- Proven communication and teamwork skills
- Cognitive flexibility
- Curiosity
- Passion for work
- Ability to influence others
- Adaptability to new environments
- Service orientation
- Judgement and decision-making
- Organizational awareness
- Ability to influence others towards a common goal
- Complex problem solving
- Negotiation
- Critical thinking
- Coordinating with others
- Writing and presentation skills
- Keeping up to date on the latest relevant statistical methodologies

Research and Statistics

- Defining project requirements to meet specific endpoints efficiently
- Creating strategies for study design and analysis
- Prototyping research models
- Evaluation of methodologies
- Building analytical models
- Machine learning
- Bayesian Analysis and naïve Bayes
 - Studied under William Jefferies, PhD, Professor Emeritus at the University of Texas at Austin, who provided intriguing image processing applications for the Bayesian method
 - Bayesian methodology for predicting lava and water flows
 - Use of Bayesian methods for machine learning
- Markov chain Monte Carlo methods (programming in R)
- Experiential knowledge (not just in the classroom) of the following:
 - Quantitative analysis
 - ANOVA
 - Regression analysis of many types
 - Power analysis
 - t tests
 - Parametric and non-parametric methodologies, and when to use them

- Variable analysis and database design to match the data to study assets such as instruments and other data input modes
 - Qualitative analysis
- Epidemiology, especially as it relates to population health initiatives
- Fitting specific research into a scientific background using thorough literature review methods
- Reporting how given study results affect the landscape of the study's background
- Suggesting areas for further study based on study results
- Recommending policy changes based on study results in the context of other studies and the background of the situation
- Randomization and sampling methods
- Survey design and deployment
- Establishing protocols for data collection
- Blind and non-blind study methods including unblinding treatment assignments related to unexpected events and appropriately handling unblinded information
- Assessment of the statistical impact of protocol deviations and ability to update strategies keeping the project endpoint in view
- Statistical reporting according to standardized documentation standards
- Deriving new statistical strategies from other people's research
- Ad hoc statistical consulting on a large variety of projects
- Instruction and mentoring in essential statistics research skills (as teaching assistant in English at Boston College and in SAS at the University of Vermont)

Programming, Statistical and Other

- Software engineering in many languages and operating systems
- Quantitative statistics programming scripting and other languages or tools
 - R Programming ([certification from Johns Hopkins](#))
 - SAS (including teaching assistanceship in SAS programming at UVM)
 - Stata
 - SPSS
 - Matlab
 - Minitab
 - Statistica
 - PSPP
 - Mathematica
 - C and C++
 - Python
- Qualitative analysis tools
 - NVivo
 - Atlas.ti
- Graphical user interface and design in a data acquisition and control setting
- Translating maps, graphs, and electrical specifications on paper into interactive software

Data

- Analytical tools for security, quality, and collaboration of data
- Data management with SQL
- Data structure design
- Getting and cleaning data ([certification from Johns Hopkins](#))
- Research Data Management and Sharing ([certification from Johns Hopkins](#))
- Deep familiarity with data management tools ([certification from Johns Hopkins](#))
- Currently studying under Jeff Leek, PhD, Roger D. Peng, PhD & Brian Caffo, PhD at Johns Hopkins University towards an advanced certificate in Data Science to supplement my statistics graduate work at UVM, which was completed before the development of important new tools
- Tidy data practices
- Data analytics
- Hadoop
- MapReduce
- Spark
- RStudio
- XAMPP

Management

- Project leadership
- Management of teams in the fields of software engineering, real estate, and statistical research
- Successfully led team to complete more than 97 research studies from proposal through reporting of results
- Managing complex budgets

Writing

- Reporting results in written reports, in presentations, on websites, or in internal research documentation is a strong skill
- Excellent writing skills: familiar with clinical study protocols and case report forms (CRFs) as they pertain to statistical strategies and methodologies
- Editing and contributing to peer-reviewed articles or white papers
- Preparation of IRB documentation
- Identification of specific ethics issues
- Reporting how given study results affect the landscape of the study's background
- Extensive editing experience
- Technical writing

Tools

- Microsoft Office

- Excel (with macros)
- Word (with macros)
- Powerpoint
- Publisher
- Access
- Apple software
- Operating Systems
 - Windows
 - Linux
 - Mac
- Programming Tools
 - Git
 - GitHub
 - Markdown
 - Jupyter
 - Anaconda
 - RStudio
 - XAMPP

Certifications

- [R Programming, Johns Hopkins University](#), License #2HWX3JADBU23. From April 2018, no expiration. Grade: 92%.
- [Getting and Cleaning Data, Johns Hopkins University](#), License #W73H5EWB93N9. From April 2018, no expiration. Grade 94.1%
- [Research Data Management and Sharing, Johns Hopkins University](#), License #MVKL6TZ5ZR2N, From April 2018, no expiration. Grade: 97.2%.
- [The Data Scientist's Toolbox, Johns Hopkins University](#), License #GU4R7YKBBK6Z6. From April 2018, no expiration. Grade: 100%.
- [Exploratory Data Analysis, Johns Hopkins University](#), License #JTLKP2BB5Q3N, From May 2018, no expiration. Grade: 97.2%.
- [Getting Started with Python, University of Michigan](#), License #QW4BSNPGNGVF. From May 23, 2018, no expiration. Grade: 100%.
- In process: Currently studying under Jeff Leek, PhD, Roger D. Peng, PhD & Brian Caffo, PhD at Johns Hopkins University towards an advanced certificate in Data Science to supplement my statistics graduate work at UVM, which was completed before the development of important new tools