

DR. STEVEN SCHEPANSKI

Data Scientist, Biostatistician and Psychologist

With over 5 years of experience using R and Python for extensive data analysis, visualisation, and predictive modelling. My unconventional academic journey underscores a genuine passion for pioneering data solutions. Thriving in diverse environments, I adeptly communicate insights through numerical representations, showcasing adaptability across interdisciplinary domains. Proficient in transforming intricate numerical concepts into practical, data-driven solutions that seamlessly unite qualitative demands with quantitative results.



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SKILLS

Programming Languages: Python, R, SQL, Matlab | **Data Analytics & Machine Learning:** SPSS, SAS, Excel, TensorFlow/Keras, SciKit-Learn, Pandas, NumPy | **Data Visualisation:** Matplotlib, Seaborn, Plotly, ggplot, Altair, Dash | **Database & Management:** PostgreSQL | **Software Development & Tools:** Git, Bash, Pytest | **Cloud Platforms:** Google Cloud | **Research & Data Capture:** REDCap, SurveyMonkey | **Web Development & Dashboards:** Plotly (Dash), Streamlit | **Awards:** Professional Development Awards (2018, 2019), Research Grants for Early-Career Professionals

PROFESSIONAL EXPERIENCE

Research and Data Scientist

Massachusetts General Hospital, Harvard Medical School

Jan-2023 - May-2023 | Boston, MA, USA

- Applied advanced bioinformatics to interpret single-cell RNA sequencing data, identifying diverse cell populations and revealing critical gene expression patterns for over 50+ mother-child pairs over multiple measurements throughout pregnancy and beyond, identifying key risk factors, predictors, and outcomes during and after pregnancy.
- Led the integration of multiple single-cell RNA sequencing datasets, removing batch effects and ensuring data coherence using tools like Seurat v3 and Harmony. Developed dynamic visualisations and interactive dashboards for collaborative data exploration, enhancing accessibility and interpretability of complex biological insights.
- Supervised, mentored, and provided guidance for 10+ colleagues and students at various academic levels in statistical analyses and methodological planning that boosted project success rate.
- Provided guidance and support to LGBTQ+ individuals in the department, playing a pivotal role in fostering inclusivity.

Project Manager and Associate Editor

Springer Nature Group

Jun-2021 - Dec-2022 | Remote

- Spearheaded cross-functional international projects, ensuring prompt delivery, surpassing cost-saving targets, and upholding rigorous quality standards.
- Orchestrated the optimisation of project and editorial workflows through strategic planning, significantly enhancing overall efficiency.
- Demonstrated adaptability in navigating dynamic challenges, consistently surpassing stakeholder expectations.

Postdoctoral and Doctoral Research Scientist, and master student

University Medical Center Hamburg-Eppendorf

Oct-2017 - Dec-2022 II Hamburg, HH, Germany

- Applied advanced statistical methodologies and A/B testing for impactful data-driven decision-making, ensuring reliable insights.
- Executed robust research strategies for preclinical and clinical studies, aligning with business objectives and regulatory standards. Implemented cutting-edge data acquisition techniques for high-quality datasets.
- Crafted compelling data visualisations, translating complex findings into easily understandable visuals. Developed interactive dashboards for efficient communication across diverse stakeholders.
- Published valuable insights in reputable journals and effectively communicated findings at intl. conferences.
- Collaborated seamlessly with cross-functional teams, including clinical and biostatisticians, integrating clinical insights into data interpretation. Facilitated interdisciplinary discussions to bridge the gap between experimental and clinical research.
- Demonstrated commitment to continuous learning, staying updated on industry advancements and technologies.
- Supervised and provided guidance for 20+ colleagues and students at various academic levels in statistical analyses and methodological planning that boosted project success rate.
- Mentored 5 students, delivering instructions in basic and advanced statistics for medical students, resulting in all students graduating with magna cum laude or better.
- Ghostwrote multiple methods sections of published articles, showcasing expertise in research methodology and scientific writing.
- Provided statistical and methodological guidance/support for applications of over 15 proposals for preclinical experiments, 3 clinical study cohorts, and 5 proposals for national funding agencies, contributing to successful project funding and implementation.

Master Student

University Hospital Essen

Feb-2016 - Apr-2016 II Essen, NW, Germany

- Implemented advanced statistical methodologies to enhance data quality, resulting in efficient management and analysis of large-scale longitudinal datasets.
- Executed the application of survival analysis and time-to-event methodologies in designing and analysing cohort studies, contributing to robust research outcome.
- Demonstrated strong communication skills, fostering effective collaboration, and applied project management proficiency, ensuring streamlined data-related tasks with defined timelines.
- Orchestrated clinical trials with longitudinal framework, adhering to ethical considerations and regulatory standards, ensuring compliant and impactful research.

Bachelor Student

Alsterdorf Protestant Hospital Hamburg

Aug-2015 - Oct-2015 II Hamburg, HH, Germany

- Leveraged data analysis to map cognitive patterns, offering insights for informed decision-making.
- Conducted thorough data analysis to diagnose cognitive challenges, optimising treatment strategies for improved outcomes.
- Employed data visualisation techniques to portray and interpret neurological patterns using fTCD and EEG recordings, contributing to comprehensive insights.

Bachelor Student

University Medical Center Hamburg-Eppendorf

May-2015 - Jul-2015 II Hamburg, HH, Germany

- Utilised multiple regression analysis and data-driven optimisation techniques to improve training courses, ensuring the development of healthcare staff.

Bachelor Student

University of Bremen

Jan-2014 - Dec-2014 II Bremen, HB, Germany

- Employed a range of statistical methods to optimise diagnostic processes, leading to higher diagnostic accuracy.

Bachelor Student

Dortmund Hospital of the Miners' Health Insurance Fund

Oct-2013 - May-2014 | Dortmund, NW, Germany

- Contributed to department-wide data analysis initiatives, enhancing the accuracy and efficiency of neurological assessments.

EDUCATION

University of Hamburg

Doctor of Philosophy (PhD) specialised in Systems Neurosciences and Clinical Data Science

Sep-2020 | Hamburg, HH, Germany

Dissertation: 'The role of maternal microchimerism and prenatal stress for perinatal brain development and cognition' (*summa cum laude*)

University of Trier

Master of Science (M.Sc.) in Psychology specialised in evaluation, applied diagnostics, and multivariate statistics

Sep-2020 | Trier, RP, Germany

University of Bremen

Bachelor of Science (B.Sc.) in Psychology specialised in applied statistics methodologies for clinical validations

Sep-2020 | Bremen, HB, Germany

CERTIFICATES

Data Science Bootcamp, SPICED Academy, Berlin, Germany (Sep-2023 - Nov-2023); SQL for Data Science, IBM DB0201EN (Aug-2023 - Nov-2023); Data Science for Life Sciences, Harvard University, Boston, MA, USA (Jan-2023 - Mar-2023); Molecular Biology/ Bioinformatics, University of Hamburg, HH, Germany (Oct-2017 - Sep-2019)

OTHERS

Publications: Published over 10 articles in prestigious journals, showcasing profound analytical abilities. Contributions include articles in esteemed publications such as Nature Communications, EMBO Reports, and World Journal of Pediatrics.

Conferences & Talks: Delivered scientific presentations at renowned international meetings, including the FENS, Society of Neuroscience, Keystone Symposia, Sex Differences in immunity, European Society of Reproductive Immunology worldwide.

Languages: German (native), English (fluent), French (Basic), Spanish (Basic)