

Nathaniel D. Phillips, PhD

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SUMMARY

Innovative data science leader with 10+ years of experience in healthcare analytics in academia, pharma, and healthtech. Pioneers new data solutions and processes that reduce costs, increase team efficiency and enabling new use-cases. Open to senior scientific and leadership roles in a mission driven organization.

EXPERIENCE

CTO & Co-Founder

Plinth Analytics

June 2022 - February 2024, Brooklyn, NY

- Co-founded a bootstrapped, entirely cash-flowed healthcare analytics data solutions company, generating ~\$1M in revenue and growing to a team of 5 full time employees in 1.5 years without any external funding.
- Designed scalable health economics and clinical outcome dashboards, packages, and reporting tools leveraging EHR, medical claims, and genomic data and clinical terminologies such as ICD-10, CPT and SNOMED saving tens of thousands of hours of developer time.
- Led a data science team, teaching advanced epidemiology, biostatistical, data analytics and visualization techniques, defining team goals and processes and delivering performance feedback.
- Negotiated initial contracts and intermediate feature requests and then ultimately delivered C-level presentations showcasing project ROI, driving contract renewals and client satisfaction.

Senior Quantitative Scientist

Flatiron Health

February 2020 - June 2022, New York, NY

- Led development of real-world evidence tools, including cohort generation, data quality scorecards, reporting, and data visualization developed from structured and abstracted data synthesized from oncology EHR and genomics data.
- Standardized SOPs and best practices, enhancing code quality and reproducibility for a team of 90+ statistical programmers.
- Designed and implemented solutions for cohort quality control and treatment pattern analyses, reducing associated costs by over 80%.
- Directed cross-functional user research and solution design efforts, increasing team adoption of tools by 70%.

Senior Data Scientist

Roche

March 2018 - January 2020, Basel Switzerland

- Led development of ETL, statistical, and visualization software packages, reducing the timelines needed for feasibility studies from EHR, claims, and genomic real-world data by over 50%.
- Collaborated with pharma R&D leaders and utilized analytical techniques to enhance decision-making in metastatic breast cancer investigations, increasing efficiency by 30%.
- Provided subject matter expertise on using real-world data for R&D and post-approval marketing, driving cross-functional collaboration.
- Created and maintained an R package adopted by 100+ scientists, accelerating patient cohort generation from EHR and claims data by 80%.

Post-Doctoral Researcher

University of Basel

February 2016 - February 2018, Basel Switzerland

- Lead multiple data science bootcamps improving proficiency in advanced data analysis for students and industry professionals in healthcare, finance and education.
- Delivered invited talks on judgment and decision-making at leading international conferences (e.g., INFORMS, useR!, EADM), showcasing research to academic and industry audiences.
- Facilitated cross-functional collaboration with data analysts to integrate cutting-edge statistical tools and enhance precision in predicting decision outcomes.

Post-Doctoral Researcher

University of Konstanz

September 2014 - January 2016, Konstanz, Germany

- Taught courses on judgment, decision-making, and statistical programming, equipping students with analytical and problem-solving skills.
- Published novel algorithms for machine learning-based rules to improve medical decision making in high cost decision domains.
- Created FFTrees, toolkit for generating efficient medical decision rules from demographic, diagnostic, and treatment data that has since been used by thousands of medical researchers internationally.

- Authored and produced “YaRrr! The Pirate’s Guide to R” an online textbook with YouTube videos used by students and professionals globally to learn and apply best practices for data science with the R programming language.

Doctoral Researcher

Max Planck Institute for Human Development

October 2012 – September 2014, Berlin, Germany

- Designed empirical studies on cognitive development, applying advanced statistical models, culminating in the publication of three peer-reviewed journal articles that contributed to scientific understanding of human decision making processes.
- Led 3 international workshops for young researchers on theoretical and applied topics related to judgment and decision making.
- Published statistical models and simulations showing why competition changes decision making strategies under risk with direct applications in consumer decision making.

Doctoral Researcher

University of Basel

May 2011 – September 2012, Basel, Switzerland

- Developed comprehensive framework exploring human decision-making mechanisms in risk-laden environments by leveraging advanced statistical methodologies.
- Developed and refined computational models to predict decision-making in high-risk scenarios, increasing prediction accuracy by 20%.
- Developed comprehensive lectures on statistical analysis and modeling, implementing R to equip students for research-oriented roles.

EDUCATION

Doctorate in Psychology

University of Basel • Basel, Switzerland • 2014

Masters in Psychology

Ohio University • Athens, OH • 2011

Bachelor of Arts in Mathematics

Grinnell College • Grinnell, Iowa • 2005

SKILLS

Soft Skills: leadership, mentorship, cross-functional collaboration, strategic thinking, adaptability, problem-solving, communication, team building, decision-making, stakeholder engagement, conflict resolution, time management, attention to detail, emotional intelligence, creativity, organizational skills, project management, cultural awareness, negotiation skills, innovation, resilience, critical thinking, active listening, facilitation, process improvement.

Analytical Methods: Descriptive statistics, inferential statistics, hypothesis testing, regression analysis (linear, logistic, Poisson), survival analysis, multivariate analysis, generalized linear models (GLMs), mixed-effects models, hierarchical models, Bayesian inference, decision trees, random forests, clustering (k-means, hierarchical), principal component analysis (PCA), factor analysis, dimensionality reduction, time-series analysis, propensity score matching, causal inference, sensitivity analysis, meta-analysis, non-parametric tests Markov models, simulation modeling.

Version Control: Git, GitHub, GitLab

Analytics Tools: RStudio, Jupyter, Posit Workbench, Posit Package Manager, Looker, Shiny, Spark, SPSS, Excel, Tableau, Microsoft Power BI.

Data Storage: AWS, Snowflake, Redshift, S3, BigQuery, PostgreSQL, Google Cloud

Programming Languages: R, Python, SQL, SPSS.