

# Nathaniel D. Phillips, PhD

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## SUMMARY

Innovative data science leader with 15+ years of experience in healthcare analytics in academia, pharma, and health tech. Pioneered revenue-generating data products, reducing research costs by over 70% and enhancing team efficiency by 50%. Open to senior scientific and leadership roles in a mission-driven organization to drive impactful solutions for data-driven decision-making on high-impact, cross-functional teams.

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## EXPERIENCE

### CTO & Co-Founder

#### Plinth Analytics

June 2022 - February 2024, Brooklyn, NY

- Co-founded a healthcare analytics solutions company, generating ~\$1M in revenue from pharma and healthtech clients in 1.5 years.
- Designed scalable data dashboards, packages, and reporting tools leveraging EHR, claims, and genomic data, reducing client costs by 40%+ and saving 2,000+ hours of developer work annually.
- Led a data science team, defining goals and processes to deliver high-impact solutions from observational healthcare data successfully.
- 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, improving data insights and operational efficiency across EHR and genomics projects.
- 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 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 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.
- Created lab standards for reproducible research and data sharing that saved thousands of research hours.

### 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, a toolkit for generating efficient medical decision rules from demographic, diagnostic, and treatment data high-cost 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 decisions in high-risk scenarios, increasing prediction accuracy by 20%.
- Developed comprehensive lectures on statistical analysis and modeling, implementing R to equip students for research roles.

## Graduate Student

Ohio University

June 2007 – April 2011

- Instructor for undergraduate courses in statistics and research methods, receiving >95% positive ratings from students.
- Oversaw data collection processes and recruited participants, ensuring high-quality research data from over 1,000 individuals.
- Executed experimental designs in psychology research, utilizing Authorware and PsychoPy, with scientific rigor.

## Marketing Statistician

Musician's Friend

June 2005 – June 2006, Medford, OR

- Led monitoring of digital and physical marketing campaigns, reducing the time to obtaining core campaign insights by 50% through automated analytical pipelines built with Excel.
- Applied predictive models of customer purchasing in SPSS, increasing prediction accuracy by over 70%.
- Presented marketing insights at senior leadership meetings, translating and communicating statistical methods and conclusions to non-technical leaders.

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## 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

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## SKILLS

**Cloud Platforms:** AWS, BigQuery

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

**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.

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

**Version Control:** Git, GitHub, GitLab

**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.

**Programming Languages:** R, Python, SQL, SPSS.