

# ABHIK ROY



## EDUCATION

- Western Michigan University  
Ph.D. in Program Evaluation  
Kalamazoo, MI
- Michigan Technological University  
M.S. in Mathematics  
Houghton, MI
- West Virginia Wesleyan College  
B.S. in Mathematics  
Buckhannon, WV



## PROFESSIONAL EXPERIENCE

2023  
|  
2016

- *Assistant Professor*  
West Virginia University  
Morgantown, WV
  - Authored and co-authored 15 peer-reviewed publications, contributing to various fields including program evaluation.
  - Conducted over 20 rigorous evaluations leading to increases in program effectiveness.
  - Designed and deployed interactive surveys using HTML, CSS, and JavaScript on the Qualtrics platform, reaching up to 4,000 respondents.
  - Extracted and cleaned data from multiple remote sources; developed and published 20+ interactive visualizations for public reporting and client dissemination using Rmarkdown and Shiny.
  - Mentored 4 Masters and Doctoral students, guiding them to successful completion of their academic research projects.
  - Taught courses in evaluation, measurement, research methods, and survey design, with a focus on data science techniques, to over 500 students.

2016  
|  
2014

- *Data Analyst*  
University of Kansas  
Lawrence, KS
  - Conducted comprehensive studies using qualitative, quantitative, and mixed-methods approaches, and presented findings to senior management, influencing policy changes.
  - Crafted tailored evaluations that met the needs of diverse stakeholders, resulting in actionable insights for multiple non-academic departments.
  - Designed and administered surveys to over 300 university students and staff, achieving response rates ranging from 47% - 91%.
  - Engineered web applications using R and Tableau, streamlining data extraction and visualization processes.
  - Spearheaded research initiatives that increased student retention rates by 3% - 5% through predictive statistical modeling.

## CONTACT INFORMATION

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## EXPERTISE

Data visualization

Markup using *L<sup>A</sup>T<sub>E</sub>X*

Program evaluations from planning to reporting

Quantitative, qualitative, and mixed method studies

R programming

Social network analysis

Survey design, administration, and research





Statistical modeling and analysis

Text analytics



Web application development and static/dynamic reporting using



## SELECT EVALUATION WORK

Current   2023	<p><i>Lead Program Evaluator &amp; Methodologist - Healthy Start Initiative</i> (<a href="#">HRSA-19-049</a> Total Award: \$5,470,000) West Virginia University Research Corporation  Morgantown, WV</p> <ul style="list-style-type: none"> <li>Conducted process, monitoring, and impact evaluations at the program level.</li> <li>Designed and validated survey tools, evaluating the experiences of more than 50 participants.</li> <li>Generated two comprehensive internal evaluation documents and prepared an evaluation proposal aimed at federal funding renewal.</li> <li>Utilized a mixed-methods design to independently analyze both longitudinal and cross-sectional data, focusing on the smoking cessation efforts of mothers and the experiences of new or distant caretakers/fathers.</li> </ul>
Current   2022	<p><i>Program Evaluator &amp; Mixed Methods Analyst - Teaching Science with Computational Thinking: Preparing Preservice Elementary Educators of the Future STEM Workforce</i> (<a href="#">2019-NSF 2142274</a> Total Award: \$294,958.00) West Virginia University  Morgantown, WV</p> <ul style="list-style-type: none"> <li>Administered process evaluations for all program activities.</li> <li>Created and employed a longitudinal mixed-method study to reduce and analyze more than 50 open-ended survey responses and six interview session transcripts, leveraging thematic/content analyses and techniques including HDBSCAN/t-SNE, k-Means, and PCA.</li> <li>Designed and validated two survey tools for assessing progress and evaluating programmatic impact.</li> <li>Produced one in-depth internal evaluation document and crafted evaluation summaries for federal reporting purposes.</li> </ul>
2022   2017	<p><i>Community Program Evaluator &amp; Data Scientist</i> WVCTSI: West Virginia Clinical and Translational Science Institute (<a href="#">2017-NIH 2U54GM104942-02</a> Total Award: \$20,000,000) West Virginia University  Morgantown, WV</p> <ul style="list-style-type: none"> <li>Analyzed large datasets using frequentist and Bayesian methods, influencing the direction and activities of 8 programs.</li> <li>Authored quarterly and internal/external annual evaluation reports for dissemination via hard copy and interactive R.</li> <li>Conducted local and multi-site multi-cluster evaluation studies, impacting 5 different core units.</li> <li>Created numerous data visualizations and 4+ Shiny applications for public and internal outcome data exploration.</li> <li>Developed and distributed customized Qualtrics surveys built with CSS and JavaScript, reaching 5,000+ individuals.</li> <li>Mentored 6 future graduate social data scientists, guiding them through successful research projects.</li> </ul>
2020   2017	<p><i>Lead Program Evaluator</i> GAUSSI: Generating, Analyzing, and Understanding Sensory and Sequencing Information: A Trans-Disciplinary Graduate Training Program in Biosensing and Computational Biology (<a href="#">2017-NSF 1450032</a> Total Award: \$3,013,779) Colorado State University  Fort Collins, CO</p> <ul style="list-style-type: none"> <li>Conducted process evaluations for 4 grant-related programs, leading to gains in member tracking, program efficiency, and participant satisfaction.</li> <li>Constructed assessment and longitudinal data visualizations, supporting inferential statistical analyses to study trends and assist in recruitment and retention efforts.</li> <li>Developed and distributed customized Qualtrics surveys built with CSS and JavaScript, achieving a 95% response rate.</li> <li>Directed unstructured and semi-structured interviews and focus groups, gathering qualitative data from 100+ participants.</li> <li>Extracted, cleaned, and visualized secondary data for various research objectives.</li> <li>Implemented mixed methods evaluations, resulting in 9 published reports that influenced program policies and were used for reporting to the funding agency.</li> </ul>

## SELECT PRESENTATIONS AND TALKS

2022	<p>Best of Both Worlds: Affordances of Mixing Machine Learning and Qualitative Content Analysis. <i>American Educational Research Association Annual Meeting</i>  San Diego, CA</p>
2019	<p>Why Is It That Writers Write but Fingers Don't Fing? Using Machine Learning and Lexemes to Make Sense of Nonsense. <i>American Evaluation Association Annual Conference</i>  Minneapolis, MN</p>