

ABHIK ROY



EDUCATION

- 2016 • Western Michigan University
Ph.D. in Program Evaluation • Kalamazoo, MI
- 2007 • Michigan Technological University
M.S. in Mathematics • Houghton, MI
- 2001 • West Virginia Wesleyan College
B.S. in Mathematics • Buckhannon, WV



PROFESSIONAL EXPERIENCE

- 2023
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2016 • *Assistant Professor*
West Virginia University • Morgantown, WV
- Contributed to peer-reviewed publications by authoring and submitting scholarly papers.
 - Conducted rigorous evaluations of a variety of programs, projects, and grants, contributing to their optimization and effectiveness.
 - Designed and implemented dynamic and interactive surveys using HTML, CSS, and JavaScript in the Qualtrics platform.
 - Extracted, wrangled, and cleaned data from various remote sources; developed a range of visualizations from static to interactive for report embedding or dissemination, and built web apps in Shiny all within R/RStudio.
 - Instructed classes in evaluation, measurement, and research methods, emphasizing the application of data science techniques.
 - Mentored Masters and Doctoral students, guiding their academic pursuits and research activities.
- 2016
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2014 • *Data Analyst*
University of Kansas • Lawrence, KS
- Authored detailed evaluation reports, catering to the requirements of diverse stakeholders.
 - Conducted research and deployed predictive statistical models aimed at enhancing student retention and graduation efforts.
 - Developed web applications using Shiny and Tableau, facilitating extraction, summarization, and visualization of data from the organization's Oracle database.
 - Spearheaded and delivered presentations on findings from comprehensive qualitative, quantitative, and mixed-methods studies, both large and small.



WWW

CONTACT INFORMATION

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EXPERTISE

Content, cluster, and social network analysis

Data visualization

Modeling and analysis using statistics and machine learning

Planning and conducting program evaluations

Programming and analysis in R with markup using $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$

Quantitative, qualitative, and mixed method designs and analyses

Small- and large-scale survey design, implementation, and analyses

Web app development and static/dynamic reporting using



SELECT PROJECTS

Current
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2023

Lead Program Evaluator & Methodologist

Healthy Start Initiative: Eliminating Disparities in Perinatal Health
West Virginia University Research Corporation


 Morgantown, WV

- Building valid and reliable survey instruments to assess participant experiences.
- Implementing process, monitoring, and impact evaluations of programmatic activities.
- Utilizing mixed methods designs to study participant data.
- Total Award: \$4,870,000
- [HRSA-19-049](#)

Current
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2022

Lead Program Evaluator & Mixed Methods Analyst

Teaching Science with Computational Thinking: Preparing Preservice Elementary Educators of the Future STEM Workforce
West Virginia University

 Morgantown, WV

- Applying mixed methods text analysis of written and interview data using thematic analysis and various machine learning methods.
- Constructing and validating survey instruments used to assess progress and programmatic impact.
- Implementing process and impact evaluations of program activities.
- Total Award: \$294,958.00
- [2019-NSF 2142274](#)

2022
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2017

Program Evaluator & Data Scientist

WVCTSI: West Virginia Clinical and Translational Science Institute
West Virginia University

 Morgantown, WV

- Analyzed large data sets using frequentist and Bayesian methods.
- Conducted local and multi-site multi-cluster evaluation studies.
- Developed/validated items and distributing customized Qualtrics surveys built with CSS and Javascript.
- Mentored future graduate social data scientists.
- Pulled, wrangled, and visualized secondary data in R.
- Total Award: \$20,000,000
- [2017-NIH 2U54GM104942-02](#)

2020
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2017

Lead Program Evaluator

GAUSSI: Generating, Analyzing, and Understanding Sensory and Sequencing Information: A Trans-Disciplinary Graduate Training Program in Biosensing and Computational Biology
Colorado State University

 Fort Collins, CO

- Conducted process evaluations of multiple grant related programs.
- Developed and distributed customized Qualtrics surveys built with CSS and Javascript.
- Directed unstructured and semi-structured interviews and focus groups assessing participant experiences.
- Implemented mixed methods evaluations to study program impacts on students and faculty.
- Pulled, wrangled, and visualized secondary data.
- Total Award: \$3,013,779
- [2017-NSF 1450032](#)

SELECT TALKS

2022

Best of Both Worlds: Affordances of Mixing Machine Learning and Qualitative Content Analysis
American Educational Research Association Annual Meeting

 San Diego, CA

- 2020 ● These Aren't Random Words Just Strung Together?: Using Machine Learning and Pretty Visualizations to Discover Topics in Articles.
American Evaluation Association Annual Conference 📍 virtual
- 2019 ● Why Is It That Writers Write but Fingers Don't Fing? Using Machine Learning and Lexemes to Make Sense of Nonsense.
American Evaluation Association Annual Conference 📍 Minneapolis, MN