# 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 2016 Assistant Professor

West Virginia University

- · Advising masters and doctoral level
- Authoring and submitting papers to peer Developing enhanced and interactive reviewed publications.
- Pulling data from multiple remote sources, constructing static, active, and • Evaluating various programs, projects, interactive visualizations for production and/or embedding within reports, and

Morgantown, WV

building Shiny apps and APIs within the R/RStudio environment.

- surveys in Qualtrics using HTML, CSS, & Javascipt.
- and grants.
- Teaching evaluation and methods based classes with a focus on data science.

2016 2014 Data Analyst

### University of Kansas

- · Created web apps in Shiny and Tableau to pull, summarize, and visualize data
- Led and presented findings from small and large scale qualitative, quantitative, and mixed-methods studies.

- Lawrence, KS
- Prepared evaluation reports for various stakeholders.
- from the organization's Oracle database. Researched and implemented predictive statistical models for student retention and graduation efforts.

## 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 **(** with markup using  $L\!\!\!/T_E\!X$ 

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



Current 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
- Utilizing mixed methods designs to study participant data.
- Total Award: \$4,870,000
- HRSA-19-049







Current 2022

Lead Program Evaluator & Mixed Methods Ananlyst

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 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 mutli-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 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

# SFLECT 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