# ABHIK ROY



#### **EDUCATION**

- Western Michigan University Ph.D. in Program Evaluation
- Michigan Technological University M.S. in Mathematics
- West Virginia Wesleyan College B.S. in Mathematics

- Kalamazoo, MI
- Houghton, MI
- Buckhannon, WV





### PROFESSIONAL EXPERIENCE

# 2023 2016

#### Assistant Professor

#### West Virginia University

- · 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

## Morgantown, WV

- 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 2014

#### Data Analyst

#### University of Kansas

- 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,

#### Lawrence, KS

- 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.

### **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 **(p**) 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







### SELECT EVALUATIONS

Current | 2023 Lead Program Evaluator & Methodologist

Healthy Start Initiative

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: \$5,470,000
- 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

# 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