

Harshitha Kakani

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Summary:

Master of Public Health student, public health researcher, and data analyst with extensive experience in epidemiology, data analytics, health systems research, population health analytics, and federally funded qualitative studies, interested in health law, policy, and patient advocacy. Skilled in R, Python, SAS, SQL, and advanced analytics, with applied experience across bioinformatics, environmental surveillance, infectious disease modeling, and human-rights casework. Background includes supporting Medicare/Medicaid-focused research, analyzing Social Security Disability and immigration health cases, and evaluating harm-reduction care models within regulatory and ethical frameworks. Committed to leveraging data science, public health expertise, and legal training to strengthen evidence-based policy, improve population health, and advance equity within government, healthcare, and legal systems.

Education:

Master of Public Health (MPH)

University of Miami, Leonard M. Miller School of Medicine (in progress, anticipated graduation December 2025)

Concentrations: Epidemiology, Biostatistics, Health Policy

Relevant Coursework: Biostatistics I, Clinical Trials, Survey of Statistical Computing, Data Science & ML in Health Research, Infectious Disease Epi, Molecular & Genetic Epi, Environmental Health, Health Economics & Policy, US Health Systems, Legal Environment of Business, Sports Law

Bachelor of Science in Marketing & Analytics

Temple University

Technical Skills:

Programming & Analytics: R, Python (basic), SAS, SQL, PLINK, Bioconductor, STATA (basic)

Data Tools: Tableau, RedCap, Salesforce, EPIC, UHealth Chart, Quarto, Git/GitHub

Methods: GWAS, QTL colocalization, fine-mapping, MR, causal inference, DCEs, qualitative coding, predictive modeling, data visualization, QA/QC, large-scale dataset management

Other: Adobe Suite, VB, Microsoft Excel (advanced), Pivot Tables

Research and Data Experience:

Bioinformatics & Computational Biology Researcher

Washington University in St. Louis & Indiana University — June 2025–present

- Analyze large-scale human genomics datasets (UK Biobank, All of Us, dbGaP) using R, Python, and HPC clusters.
- Conduct GWAS, QTL colocalization, genetic fine-mapping, polygenic risk prediction, and Mendelian randomization.
- Build ML and causal inference models integrating genetic, molecular, and clinical data to identify cardiometabolic and renal disease pathways.

- Develop and maintain reproducible bioinformatics pipelines using PLINK, Bioconductor, TensorFlow, and PyTorch.
- Collaborate with cross-institution teams to translate analytic findings into actionable precision-medicine insights.

Public Health Research & Surveillance Analyst

University of Miami Health System — *Mar 2025–Present*

- Supported environmental epidemiology surveillance for Dengue, West Nile, Oropouche viruses, and Candida auris using wastewater and coastal sampling.
- Processed and modeled high-volume environmental & epidemiologic datasets using Python, R, SAS.
- Conducted wet lab work including DNA/RNA extraction, PCR, and microbial culturing.
- Applied geospatial methods and computational models to detect transmission hotspots and guide public health monitoring.

Qualitative & Mixed-Methods Research Analyst

IDEA Exchange Clinic (Federal Grant Project) — *Mar 2024–May 2025*

- Led qualitative analysis on adapting harm-reduction care models for pregnant women who use drugs.
- Conducted trauma-informed interviews and discrete choice experiments (DCEs); performed transcription, coding, and thematic analysis.
- Assisted with IRB submissions, protocol development, Medicare/Medicaid contextual analysis.
- Co-author on two manuscripts, including one under review at *JAMA*.
- Integrated clinical and patient-experience data by shadowing telemedicine and in-person SUD visits.

Infection Control Data Intern

University of Miami Hospital — *Aug 2024–Dec 2024*

- Conducted infection-control rounds; flagged non-compliance and coordinated with HR and Legal.
- Performed ATP testing, sink testing, and adherence audits for ORs, units, and patient rooms.
- Analyzed clinical records using EPIC and UHealth Chart; ensured alignment with infection-control protocols.
- Observed clinical procedures (midline/PICC insertions) to ensure protocol adherence.

Human Rights Policy & Health Research Fellow

University of Miami School of Law — *Jan 2025–Present*

- Coordinate and analyze Social Security Disability and Health Nexus Immigration cases.
- Review medical evidence and write case summaries supporting vulnerable populations.

Leadership and Campus Roles:

Graduate Assistant – Curriculum Committee, Department of Public Health Sciences

University of Miami — *Apr 2024–May 2025*

- Supported MPH/MD curriculum review, accreditation, and development of new MPH courses.
- Managed minutes, agendas, faculty evaluations, and REDCap-based student surveys.

Secretary & Treasurer – Public Health Student Association

University of Miami — *Aug 2024–Jan 2025*

- Managed budget, fundraising, student recruitment, and coordinated campus-wide volunteer events.

Selected Abstracts and Presentations:

- **European Society of Clinical Microbiology & Infectious Disease (ECCMID)**
Sink Drain Disinfection at an Academic Hospital in South Florida — Co-author (2025)
- **AMERSA Conference**
Adapting Tele-Harm Reduction for Peri-Pregnancy — Co-author (2025)
- **Florida Public Health Association (FPHA)** — Chosen Speaker
Neonatal Abstinence Syndrome in Infants Exposed to Maternal Cocaine Use (2024)

Volunteer Experience:

- **University of Miami Health Truck Rally:** Cancer screenings, HIV testing, pediatric vaccinations, marketplace assistance.
- **Madhuri Hospital, Hyderabad:** Assisted OB/GYN surgeries, deliveries, patient rounds; contributed to maternal health quality-improvement discussions.

Languages:

- English (Fluent)
- Telugu (Fluent)

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