

# PREMIKA AMUDHAN

New York | (607) 339-8001 | pa374@cornell.edu | [LinkedIn](#) | [GitHub](#)

## EDUCATION

Cornell University	Ithaca, New York
Master of Public Health, Concentration in Infectious Diseases Epidemiology	Expected May 2026
Sri Ramachandra Institute of Education and Research	Chennai, India
Bachelor of Science Medical Microbiology and Applied Molecular Biology, (Hons)	July 2023

## SKILLS

**Technical:** GIS Mapping, Disease Modelling, Data Management, Protocol Development, Good Clinical Practice (GCP) and Human Subjects Research IRB Proposals, HIPAA Compliance, Biostatistics, Epidemiological Modelling.

**Public Health Practice, Program Evaluation, Communication:** Infection Prevention And Control, Vaccine Advocacy, Emergency Preparedness, Health Risk Communication, M&E Framework Development, Grant Writing, Scientific Reporting, Stakeholder Engagement.

**Programming Languages:** Python, R, STATA

**Tools:** QGIS, Adobe Photoshop, REDCaps, Excel, EpiInfo, Tableau, ArcGIS, Microsoft Office.

## EXPERIENCE

NYC Office of Management & Budget (OMB) – Climate Resiliency Policy Unit	Ithaca, NY
Research Assistant	Jun 2025 – Present
<ul style="list-style-type: none"><li>Designed an interactive mapping experience aligned with FY25 climate KPIs, enabling OMB staff to quickly explore insights by borough, facility type, and exposure category.</li><li>Developed custom DAX measures to classify hazard exposure categories and project impacts.</li><li>Designed OMB’s standardized ROI matrix, connecting project categories to functional outcomes and multi-dimensional climate adaptation benefits.</li></ul>	
Atlanta Congo Coalition	Ithaca, NY
Research Assistant	Mar 2025 – Aug 2025
<ul style="list-style-type: none"><li>Developed a culturally adapted, migration-informed assessment framework for the Atlanta Congo Coalition by translating the CDC RCA into practical tools that reflect Congolese pre-migration realities and diverse migration pathways.</li><li>Led community-centered research to uncover healthcare barriers and facilitators, integrating trust-building strategies, multilingual tools, and diaspora-informed insights into ACC’s assessment framework.</li></ul>	
Vishwa Management Services	Chennai, India
Monitoring and Evaluation Analyst (Hybrid)	Oct 2023 – Oct 2024
<ul style="list-style-type: none"><li>Designed and maintained performance dashboards to translate infrastructure project data into actionable insights across telecom, civil, and electrical sectors.</li><li>Developed and automated key performance indicator frameworks using Excel and Python to visualize compliance gaps and operational performance.</li><li>Communicated findings across cross-functional teams to support evidence-based planning, stakeholder engagement, and adaptive program management.</li></ul>	
Harvard Medical School, Centre for Engineered Therapeutics,	Boston, MA
Research Assistant	May 2023 – Oct 2023
<ul style="list-style-type: none"><li>Led development of improved calcium phosphate-based materials for orthopedic use, applying experimental design and performance testing to optimize safety and strength.</li><li>Designed and analyzed 3D cell culture models to study bone cell interactions, supported by literature reviews and thematic analysis for cross-disciplinary biomaterials and microfluidics research.</li><li><i>Received Honorable Mention</i> for innovation in experimental design and presentation.</li></ul>	
Sri Ramachandra Institute of Education and Research	Chennai, India
Research Assistant	Jan 2022 – Jan 2023
<ul style="list-style-type: none"><li>Standardized lab data for trend reporting in healthcare-associated infections (HAIs), reinforcing data formatting and structuring techniques applicable to GIS-based health mapping.</li><li>Conducted diagnostic testing for infectious diseases using automated systems to support outbreak investigations and hospital-acquired infection surveillance, informing clinical decisions and improving patient outcomes.</li></ul>	

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## OTHER RELEVANT PROJECTS

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### Climate Adaptation ROI Matrix

Ithaca, New York

#### Research Assistant, NYC Office of Management & Budget

Sep 2025 – Nov 2025

Built a unified ROI framework for OMB that organizes climate adaptation projects into clear categories and maps their benefits across environmental, public health, economic, and equity domains.

### Climate Resiliency Exposure Dashboard

Ithaca, New York

#### Research Assistant, NYC Office of Management & Budget

May 2025 – Aug 2025

Designed a citywide dashboard to help OMB understand where New York City is most exposed to climate hazards—indoor heat, outdoor heat, coastal flooding, and stormwater. The goal was to translate scattered datasets and long policy documents into one interactive, decision-ready tool that supports budget planning and resiliency investments.

### Rapid Community Health Assessment Toolkit

Ithaca, New York

#### Research Assistant, Atlanta Congo Coalition

Mar 2025 – Aug 2025

Developed a migration- and culture-informed assessment framework for ACC by adapting the CDC RCA into actionable tools tailored to Congolese pre-migration health realities and diverse migration pathways.

### LymeShield: Development of Oral Lyme Disease Vaccine for Reservoir Species

Ithaca, New York

#### Project lead/Prototype Developer, Cornell Animal Health Hackathon

Jan 2025 – Feb 2025

- Led multidisciplinary team to design an oral vaccine targeting rodent reservoir species to disrupt Lyme disease transmission cycle.
- Developed a translational implementation model integrating ecological control strategies with veterinary vaccination programs, *Awarded "Most Financial and Market Potential Animal Health Solution"*

## RESEARCH PUBLICATION

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- Antony, T., Senthilnathan, Y., Madhavakumar, R., **Amudhan, P.**, Venkataraman, S., Rally, S., Pitani, R. S., & Arumugam, I. (2024). Comparative Evaluation of Colistin-Susceptibility Testing in Carbapenem-Resistant *Klebsiella pneumoniae* Using VITEK, Colistin Broth Disc Elution, and Colistin Broth Microdilution. *Cureus*, 16(7), e65796. <https://doi.org/10.7759/cureus.65796>

## AWARDS

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- Awarded "Most Financial and Market Potential Animal Health Solution" in Cornell Animal Health Hackathon for LymeShield.
- Received Honorable Mention for innovation in experimental design and presentation during internship at Harvard University.