

# Kimberly Palaguachi-Lopez

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## EDUCATION

**Columbia University Mailman School of Public Health – New York, NY**

May 2026

**Master of Science in Biostatistics, Health Data Science**

- Relevant Coursework: Biostatistics I & II, Epidemiology, Probability, Statistical Inference, SAS, Data Science I & II, Survival Analysis, Longitudinal Data Analysis, Randomized Clinical Trials.

**Lehigh University – Bethlehem, PA**

May 2024

**Bachelor of Science in Population Health**

- GPA: 3.72
- Relevant Coursework: Methods in Epidemiology, Population Health Data Science & Algorithms Labs, Spatial Epidemiology, Environmental Epidemiology, Outbreak Science & Disease Forecasting.

## RESEARCH EXPERIENCE

**Summer Research Intern – Boston, MA**

June 2025 - Present

Joslin Diabetes Research Center | Harvard Medical School

- Analyze data from an NIH-funded pilot study examining the impact of fenofibrate on GFR decline in Type 1 Diabetes patients with early diabetic kidney disease including assessing acute effects of fenofibrate through linear and mixed-effect methods and assessing significance of primary endpoints through ANCOVA.

**NYSPI & Columbia University Department of Psychiatry – New York, NY**

February 2025 – Present

Data Analysis Research Assistant

- Assist in designing research studies to test hypotheses on racial trauma and resilience by developing statistical analysis plans and selecting appropriate modeling approaches.
- Apply Bayesian methods to examine the relationship between racial trauma and resilience by analyzing cohort data.
- Conduct latent variable analysis in R code to identify underlying psychological thresholds by refining resilience measurements for future research applications.

**Breakthrough T1D Research Foundation | Formerly JDRF – New York, NY**

June 2024 – August 2024

Improving Lives Research Intern

- Conducted a comprehensive landscape analysis 200+ clinical trials in T1D and T2D cardiovascular disease research identifying key gaps in biomarker utilization.
- Researched biomarker development for cardiovascular disease and heart failure, informing early detection preventative strategies for young T1D patients, by examining emerging diagnostic tools.
- Presented a 30-minute analysis to the research department, influencing future clinical trial funding, by synthesizing biomarker findings, and proposing 3 promising cardiovascular drug treatments for future grant applications.

**College of Health at Lehigh University – Bethlehem, PA**

January 2024 – May 2024

Epidemiology Statistical Analysis Assistant

- Processed and merged 300+ participant baseline and follow-up data, and performed exploratory analysis.
- Conducted descriptive statistics and performed hypothesis testing, identifying significant changes ( $p < 0.05$ ) in health scales over time, by analyzing survey responses across multiple time points.
- Co-authored a manuscript selected for presentation at APHA 2024 conference contributing to public health discourse, by synthesizing findings and collaborating with faculty on statistical interpretation.

**STEM – Summer Institute at Lehigh University – Bethlehem, PA**

June 2023 – August 2023

Biostatistics Research Intern

- Trained a Susceptible, Exposed, Infectious, and Recovered (SEIR) model on historical influenza data, obtained from the CDC, to estimate parameter values used in the Agent Based Model (ABM) simulated on Net logo programming.
- Managed Mortality Morbidity Weekly Report Influenza for all counties in Pennsylvania from 2010 to 2023.
- Evaluated the effectiveness of the ABM for influenza disease forecasting and assisted in writing an academic paper.

Co-Research Author

- Conducted extensive literature review research on the relationship between asthma and cold temperatures.
- Contributed to the publication of an academic research paper focused on nasal malondialdehyde mediating the effects of cold air exposure on pediatric asthma symptoms.

Institute of Critical Race & Ethnic Studies at Lehigh University – Bethlehem, PA

February 2021 – May 2021

Undergraduate Data Analyst Assistant

- Attended weekly 3 hours of meetings with colleagues to review agendas and planning new projects.
- Gather 5,000+ participant's personal experiences into Google Sheets during the COVID-19 pandemic via social media, used to determine how the pandemic is affecting race and gender in data analysis.

## WORK EXPERIENCE

Shift's Chat Bot Advising Co-op, Bill & Melinda Gates Foundation – Remote

November 2022 – December 2023

KIPP NYC Representative

- Engaged in strategic meetings with partner organizations to offer expert consultation on testing procedures, while also delivering valuable feedback to enhance their testing initiatives and improve high school student alumni support through college transition.
- Facilitated effective communication and collaboration between students, caregivers, and the KIPP NYC community, fostering a cohesive partnership within the hybrid advising co-op network.
- Actively participated in monthly advisory council meetings and co-op webinar calls to assess the outcomes of chatbot testing, ensuring that data-driven insights were leveraged for continuous improvement.

Village Care Max – Manhattan, NY

June 2023 – August 2023

Data Entry Intern

- Retrieved vaccination Electronic Health Record (EHR) data from the Citywide Immunization Registry for Village Care patients across the broader New York City area.
- Systematically processed and incorporated new data into database systems, cross-referenced and validated against Village Care records.
- Proficiently managed, organized, and securely stored over 3,000 data entries within spreadsheets, consistently upholding strict HIPAA compliance standards.

Pathways To Trust – Remote

July 2022 – August 2022

Strategic Partnership Donor Development Intern

- Conducted comprehensive research to identify prospective donors and sponsors for Pathways To Trust, facilitating the organization's patient advocacy programs
- Collaborated with PTT partners to actively seek out suitable candidates for disease clinical trials, contributing to the expansion of the organization's participant network.
- Orchestrated effective communication and teamwork with a group of interns to proactively explore grant opportunities for PPT to ensure eligibility for future funding.

## PUBLICATIONS

Nasal Malondialdehyde Mediating the Effects of Colder Air Exposure on Pediatric Asthma Symptoms

*Pediatric Research*

April 2024

23 Pages, Co- writers: He, Linchen; Norris, Christina ; Barkjohn, Karoline; Li, Zhen; Li, Feng; Zheng, Yinping; Black, Marilyn; Bergin, Michael; Zhang, Junfeng (Jim)

## LEADERSHIP ACTIVITIES

The Braven Accelerator – Remote

August 2023 – December 2023

Fellow

- Developed workforce skills such as leadership, operating and managing, communicating & networking, working in teams, and problem solving by completing a 15-week leadership and professional development course.
- Designed a career plan by outlining 7 specific, short-term goals using the SMART goals method and identifying possible obstacles, strengths and support systems to help achieve each goal.

- Facilitated data collection as lead researcher in the capstone group project where we aim to increase United flight travel for non-frequent air traveler college students.

#### **Southeast Asia at Lehigh (SEAL) – Bethlehem, PA**

August 2022 – May 2024

##### **Vice President**

- Promoted from club secretary to club vice president based on a demonstrated commitment to the organization and my leadership contributions during a critical period of need.
- Facilitated and planned many Southeast Asian cultural events while creating an inclusive environment for students.
- Provided dynamic leadership and strategic vision for the SEAL club executive board and sub-committee by improving event logistics for maximum event efficiency contributing to being awarded Student Organization of 2023-2024.

#### **F1RST Student Organization – Bethlehem, PA**

August 2022 – May 2024

- Mentored first and second year students on academic planning, professional development, and navigating university resources to support their transition to college.

### **HONORS & AWARDS**

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#### **Dean's List– Lehigh University**

Spring 2021- Spring 2024

Recognized outstanding academic achievement who have earned a scholastic average of 3.6, or greater; and carry at least 12 hours of regularly graded courses.

#### **Hispanic Scholarship Fund Scholar**

June 2024

Selected as one of 10,000 scholars from a competitive pool of over 100,000 applicants. The distinction recognizes academic excellence, hard work, and dedication.

#### **Tri Alpha Honor Society Member– Lehigh University**

March 2024

The Alpha Alpha Alpha (Tri-Alpha) Epsilon Chapter at Lehigh recognizes the academic achievements of first-generation college students who have achieved an overall undergraduate GPA of at least 3.5 on a 4.0 scale.

### **SKILLS**

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**Statistical Languages:** Proficient in R, Python, and SAS.

**Statistical Analysis:** Statistical modeling, regression analysis, hypothesis testing, and multivariate analysis.

**Data Analysis:** Skilled in Python libraries (NumPy, Pandas, Matplotlib, SciPy) for data manipulation and statistical modeling; GitHub for version control and collaboration.

**Data visualization:** Proficient in R (ggplot2), Excel, ArcGISPro Mapping

**Professional Focus:** Leveraging data to advance research in cardiovascular, chronic diseases, promoting health equity.