

Keshav Kumar

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PROFESSIONAL SUMMARY

Certified in Public Health (CPH) and detail-oriented data analyst specialized in epidemiology and biostatistics, with strong foundation in medical sciences. Proficient in R, Stata, SPSS, Tableau, Qualtrics and skilled in applying deep learning and machine learning techniques with Python to conduct robust data analysis, forecasting and modeling. Adept at advanced analytical methods, hypothesis testing and statistical software to manipulate and visualize large-scale datasets effectively. Skilled in crafting structured reports, creating and maintaining work and [personal websites](#) using WordPress, CSS, and data visualization tools, and extracting insights from complex datasets. Demonstrates strong communication, problem-solving, and posses a proven ability to coordinate with multicultural stakeholders and effectively disseminate research findings at national conferences.

PROFESSIONAL EXPERIENCES

Center for Public Health Systems Science, MO, USA

Mar 2023 – May 2024

Graduate Research Assistant

- Managed data collection, cleaning, and management of CDC's EHDI national data from 2007 to 2021 for 50 states and the District of Columbia.
- Scheduled and coordinated meetings, prepared materials, and documented commitments and follow-ups.
- Developed and implemented a codebook and analysis plan of the collected data in the project.
- Leveraged R for analysis and visualization, with R codes integrated into Git for effective version control and track changes.
- Performed statistical analysis (Poisson and negative binomial) to investigate the the impact of sociodemographic factors on infant hearing loss cases.
- Contributed to website design and maintenance, using shiny ensuring public accessibility of data and visualizations at <https://ehdidata.wustl.edu/>
- Generated structured reports, charts, graphs, and tables for use by investigators and for publication and presentation.

Toriola Lab, Department of Surgery, MO, USA

May 2023 – Aug 2023

Graduate Student

- Led translational and implementation study investigating the association dietary metabolites on mammographic breast density.
- Ensured compliance with IRB guidelines and study protocols.
- Analyzed and applied advanced statistical tests (Multivariable linear regression) on the cleaned and imputed metabolomics dataset.
- Created tables, examined the racial variation in breast density, and vizualized results using R, and Tableau.
- Organized and scheduled DUET clinical trial activities, recruited and consented participants, and facilitated communication among team members.

University Advancement, WashU, MO, USA

Sep 2022 – Mar 2023

Engagement Ambassador

- Spearheaded fundraising campaigns, leveraging donations to achieve university goals.

- Assisted in scheduling meetings, preparing materials, and documenting follow-ups.
- Collaborated with the supervisor on data assembly and reporting tasks, ensuring accurate and timely delivery of key metrics.
- Coded and replied to donor feedback, integrating insights into decision-making processes to improve donor relations.
- Demonstrated proficiency in utilizing the Ruffalo Noel Levitz (RNL) CRM system to manage donor data, track interactions, and generate reports.

Tata Memorial Centre (HBCH&RC), Bihar, India.

Feb 2022 – Jun 2022

District Technical Officer

- Coordinated a cancer screening program for a population of 4 million, organizing large-scale community campaigns.
- Oversaw the collection, cleaning, and analysis of quantitative data for cancer registries, enhancing data quality and integrity for effective public health decisions.
- Applied advanced proficiency in R, and Stata for detailed statistical analysis and deriving actionable insights from complex datasets.
- Developed structured reports and documentation for program monitoring, as well as program feedback reports based on monitoring and evaluation data.
- Demonstrated strong communication and organizational skills in managing follow-ups, administrative tasks, and logistics.
- Proficient in multitasking, time management, and prioritizing tasks efficiently in a fast-paced healthcare environment.

Tata Memorial Centre (MPMMCC), U.P, India.

Apr 2021 – Oct 2021

Medical Officer

- Assisted in developing research projects, interpreting results, and preparing manuscripts.
- Oversaw the data collection, cleaning, and management processes for a longitudinal clinical study, ensuring the accuracy and reliability of clinical data.
- Recruited and enrolled study participants, developed informed consent packets, and explained study procedures.
- Evaluated clinical data in conjunction with the PI and prepared detailed reports and presentations.
- Performed statistical analysis using R and SPSS for both quantitative and qualitative studies, ensuring rigorous data analysis and interpretation.
- Conducted surveys using Qualtrics, patient interviews and coding for qualitative research, and hypothesis testing.

Max7 Hospital, Bihar, India.

Dec 2020 – Mar 2021

Resident

- Conducted patient assessments, provided treatment and counseling, and participated in research meetings.
- Coordinated clinical trial at departmental of medicine, recruited patient based on inclusion criteria, managed follow-ups, and ensured compliance with study protocols.
- Collected and analyzed patient data to support departmental research and seminar, contributing to ongoing clinical improvements and knowledge sharing.
- Served as liaison for effective intra/interdepartmental coordination
- Participated in the departmental seminars and research meetings.
- Organised various Public outreach program on tobacco cessation.

Faculty of Dental Sciences, BHU. U.P, India

Dec 2019 – Dec 2020

Junior Resident

- Conducted comprehensive data collection, cleaning, and analysis for three research papers during my residency.

- Utilized SPSS, and Stata to perform robust statistical analyses, contributing to impactful research findings.
- Created survey for research using google forms, translated data for statistical analysis.
- Organized oral health check-up camps throughout the district for oral cancer screening, alongside multiple tobacco cessation campaigns.
- Delivered patient care across various dentistry streams, participated in COVID care and preventive measures.

EDUCATION

Brown School, Washington University in St. Louis MO, USA
Master of Public Health (Epidemiology/Biostatistics) May 2024

Brown School, Washington University in St. Louis MO, USA
 Artificial Intelligence and Big Data Analytics for Public Health (AIBDA) May 2024

Google Data Analytics Professional Certificate Expected Jun 2024

Institute of Medical Sciences, Banaras Hindu University U.P, India
Bachelor of Dental Surgery (General Dentistry) Oct 2015 – Nov 2019

Institute of Management Studies, Banaras Hindu University U.P, India
Certificate course in Healthcare Management Oct,2018 – Jul 2019

PUBLICATION

- **Kumar, K.**, Kumar, P N, Kumar, D, Kumar, M, Krishna, K, Vaishali (2020). Graphical Trends and Machine Learning Forecast of COVID-19 Around the Globe. *Acta Scientific Dental Sciences*, 3(8).
- **Kumar, K.**, & Kumar, P. (2021). Learning local anesthetic techniques in the dental college of Purvanchal Region, India: A cross-sectional questionnaire study. *Journal of Indian Association of Public Health Dentistry*, 19(3), 212–216.
- Singh, A. K., Agrawal, R., T, J., & **Kumar, K.** (2020). Extranodal diffuse large B cell Non-Hodgkin's lymphoma of maxilla: An immunohistochemical study based diagnostic approach. *Journal of Oral and Maxillofacial Surgery, Medicine, and Pathology*, 32(2), 167–170.
- Amino Acid, Carbohydrate, Energy, and Peptide Metabolites and Mammographic Breast Density in Premenopausal Women – **In preparation**
- Impact of sociodemographic factors on infant hearing loss cases in infant – **In preparation**

PROFESSIONAL PRESENTATION

- 5th Cancer Research Symposium, MO, USA Nov 10, 2023
Poster- *Carbohydrate, Energy and Peptide Metabolites and Mammographic Breast Density in Premenopausal Women.*
- Guest Lecturer to MPH students. MO, USA Nov 14, 2023
Lecture on- *Cluster Analysis*
- Early Hearing Detection & Intervention Conference 2024. CO, USA Mar 17, 2024

Instructional Session- *Exploring EHDI Data: Unveiling Novel Parameters for State-to-State Comparison.*

- Early Hearing Detection & Intervention Conference 2024. CO, USA Mar 18, 2024
Poster- *Key Metrics to Benchmark State-level Early Hearing Loss Detection and Intervention Programs.*
- Research WithOut Walls 2024. MO, USA Apr 25, 2024
Poster- *Exploring the Impact of biopsychosocial Factors on Hearing Loss Incidence Rates: A Population-Based Study.*

LICENSES & CERTIFICATION

Certified in Public Health	Mar 2024 – Present
CITI Program Certification course with Human Research	Sep 2022 – Present
HIPPA101 Privacy Compliance Training	Jul 2022 – Present
Certified Basic Life Support (BLS) for Healthcare Providers. AHA	Jan 2021 – Jan 2023
Certified Advanced Cardiovascular Life Support (ACLS). AHA	Jan 2021 – Jan 2023

COMMITTEES & BOARDS

Cell to Society, Brown School, WashU Sep 2022 – Dec 2023
President

- Established the Cell to Society initiative for graduate students, providing a platform to discuss the implementation of scientific research in public health.
- Reinforced classroom education into personal and professional development of graduate students.
- Hosted monthly events where students can listen and engage in lively discussions with peers and guest speakers.
- Conducted Qualtrics surveys to gather feedback and implemented an evidence-based approach in decision-making.

Graduate Impact Forum, Gephardt Institute Sep 2022 – May 2023
Advisory Committee member

- Served as a board member of the Graduate Impact Forum to empower graduate and professional students for civic engagement.
- Contributed to monthly board meetings and helped plan and implement activities to achieve program goals.

VOLUNTEERING

Deshpande Foundation, U.P, India. Jan 2017 – Mar 2020
Master Leader

- Led self-initiated leadership projects addressing community issues aligned with SDG 3 for 3 years.
- Delivered lectures to teachers on implementing skill-based education in schools.
- Executed 13 leadership projects addressing oral hygiene, mosquito-borne diseases, and other issues in underprivileged Varanasi communities.

SKILLS

- R
- Stata
- SPSS
- Keynote, Tableau
- Python
- Deep Learning
- Machine Learning
- SQL
- Excel, PowerPoint
- REDCap
- Analytical and Problem Solving
- Research Design
- Data Visualization
- EPIC
- Qualtrics

AWARDS & HONORS

- Ranked top 4 finalist for the Inter-Institutional School of Diagnostic Innovation in Biodesign (SIB) Fellow program, fostering diagnostic innovation and entrepreneurship.
- Appointed as Indian Youth Delegation member to China in 2018, representing Indian youth internationally, organized by Government of India, and People's Republic of China.
- Awarded Brown School Global Health Scholarship to support MPH program.
- Achieved 1st Rank in Orthodontics and Dentofacial Orthopedics in 4th year BDS Professional examination.
- Attained distinction in Orthodontics & Dentofacial Orthopedics and Prosthodontics & Implantology in 4th year BDS Professional examination.
- Invited to the president's house of India to witness the Padma Award Ceremony as a winner of People's Padma Quiz 2018.
- Promoted to Master Leader for successful community projects and received a 2-star appreciation certificate for 13 leadership initiatives.