

# Keshav Kumar

The Brown School, Washington University in Saint Louis  
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## PROFESSIONAL SUMMARY

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An experienced and detail-oriented data analyst specialized in epidemiology and biostatistics, with a strong foundation in medical sciences. Proficient in applying deep learning and machine learning techniques with Python to conduct robust data analysis. Adept at employing advanced analytical methods and statistical software to manipulate and visualize large-scale datasets effectively. Excels in developing comprehensive reports, codebooks, maintaining websites, and implementing strategies to extract meaningful insights from complex datasets. Demonstrates a proven ability to coordinate with multicultural stakeholders and effectively disseminate research findings at national conferences. Experienced in translational and implementation research, with a passion for utilizing data-driven approaches to tackle public health challenges. Possesses strong communication, problem-solving, and analytical skills to spearhead innovative solutions in dynamic environments.

## PROFESSIONAL EXPERIENCES

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**Center for Public Health Systems Science, Brown School, MO, USA** March, 2023 – Present  
*Graduate Research Assistant*

- Conducted extraction and cleaning of CDC's EHDI national data from 2007 to 2021 for 50 states and the District of Columbia.
- Developed and implemented a codebook of the collected data for this project.
- Analyzed and visualized the state's performance using R studio on 51 parameters including existing and newly created parameters out of the CDC data variables.
- Assisted in website design and maintenance to make the data and visualizations publicly available. (<https://ehdidata.wustl.edu/>)
- Delivered 2- hour Instructional session to disseminate project outcome in EHDI conference 2024.
- The manuscript is currently in progress.

**Toriola Lab, Department of Surgery Public Health, MO, USA** May, 2023 – August, 2023  
*Graduate Student*

- Led a translational and implementation clinical study to investigate the association of amino acids, carbohydrates, energy, and peptides on mammographic breast density.
- The study highlights the role of dietary metabolites in breast cancer prevention strategies.
- Analyzed the large metabolomics dataset and applied advanced statistical tests.
- Abstraction of medical data from EPIC and stored in REDCap.
- Worked in the DUET Clinical study to recruit and consent participants.
- The manuscript is currently in progress.

**University Advancement, WashU, MO, USA** September, 2022 – March, 2023  
*Engagement Ambassador*

- Successfully spearheaded fundraising efforts for the university, leveraging their generous donation to achieve fundraising goals.
- Delivered management and sales skills to build rapport with alumni donors.
- Engaged with Washington University alumni, parents, and friends, gaining valuable insights into diverse perspectives.

**Tata Memorial Centre, Bihar, India.**

February, 2022 – June, 2022

*District Technical Officer*

- Led a cancer screening program for a 4 million population, and conducted large-scale campaigns to detect early-stage cancer from the community for early detection and definitive intervention.
- Collected data and reported to the higher authorities for cancer registries.
- Developed structured reports and documentation for program monitoring
- Developed program feedback reports based on monitoring & evaluation data

*Physician Assistant*

- In rotation worked as Physician Assistant to Medical Oncologist for taking detailed patient histories, obtaining informed consents, counseling on medication side effects and dosing, and managing palliative care.
- Exhibited administrative and organizational abilities through managing follow-ups, handling administrative tasks, logistical management, and inter/intra department coordination and liaison.
- Adept at multitasking and time management, handling multiple responsibilities simultaneously, prioritizing tasks efficiently, and working effectively in a fast-paced healthcare environment.

**Tata Memorial Centre, U.P, India.**

April, 2021 – October, 2021

*Medical Officer*

- Served in rotation, COVID intensive care unit, and wards for clinical and medical management of patients.
- Worked on clinical research to interview participants, record treatment outcomes, update medical records and schedule appointments.
- Worked in the Head and Neck oncology department and provided holistic cancer care while serving in OPD, wards, and operation theatre.
- Evaluated new and follow-up oral cancer cases in OPD, and performed minor day care surgical procedures.
- In the operation theatre, assisted surgeries as a secondary or tertiary surgeon.

**Max7 Hospital, Bihar, India.**

December, 2020 – March, 2021

*Resident*

- Served and learned corporate hospital work culture, disease diagnosis, and critical care management.
- Under the consultant, supervision learned OPD management and disease treatment approaches.
- Conducted a Public outreach program on tobacco cessation.

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

December, 2019 – December, 2020

*One-Year Rotary Internship*

- Served all nine streams of dentistry in addition to the emergency department at medical school.
- Provided care and treated dental patients in clinical departments.
- Performed minor oral surgeries under consultant supervision.
- Enhanced clinical skills, and interpersonal communication While working in rotation.
- Conducted oral health check-up camp in Tikri village near medical school.
- Provided COVID care and actively engaged in preventive management.
- Conducted multiple tobacco cessation campaign and oral cancer screening which was highlighted by local media.

## EDUCATION

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

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

**Google Data Analytics Professional Certificate** Expected June, 2024

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

**Institute of Management Studies, Banaras Hindu University** U.P, India  
*Certificate course in Healthcare Management* October, 2018 – July, 2019

## PUBLICATION

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- **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.
- The manuscript investigating the association of amino acids, carbohydrates, energy, and peptides with mammographic breast density is in the final stages of internal review.
- The manuscript investigating the impact of sociodemographic factors on infant hearing loss cases is currently in progress.

## PROFESSIONAL PRESENTATION

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- Poster Presentation at Cancer Research Symposium held at Siteman Cancer Center. MO, USA November 10, 2023
- Delivered a 2-hour Instructional session at the Early Hearing Detection & Intervention Conference 2024. CO, USA. March 17, 2024
- Poster presentation at the Early Hearing Detection & Intervention Conference 2024. CO, USA. March 18, 2024
- Delivered a Guest Lecture on Cluster Analysis to the Brown School's MPH students. MO, USA November 14, 2023

## LICENSES & CERTIFICATION

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CITI Program Certification course with Human Research September 2022 – Present

## COMMITTEES & BOARDS

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### Cell to Society, Brown School, WashU

September 2023 – December 2024

*Founder & President*

- Established the Cell to Society initiative for graduate students, providing a platform to discuss the implementation of scientific research in public health.
- This initiative hosts monthly events where students can listen and engage in lively discussions with peers and guest speakers.
- The platform has gained popularity and appreciation from students and administration alike.

### Graduate Impact Forum, Gephardt Institute

September 2022 – May 2023

*Advisory Committee member*

- Served as board member of graduate impact forum to increase the knowledge and capacity of graduate and professional students to engage in civic action and dialogue.
- Engaged in the monthly board member and contributed to the planning and implementation of various activities to foster program goal.

## VOLUNTEERING

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### Deshpande Foundation, Varanasi, India.

January 2017 – March 2020

*Master Leader; LEAD. Ek Soch Sandbox*

- Worked on self-initiated leadership projects, as a Leader addressed community problems in alignment with SDG 3 for 3 years.
- Addressed oral hygiene, mosquito-borne diseases, and other problems under 13 leadership projects executed in underprivileged communities in the Varanasi region.
- Promoted from leader to Master Leader Level for the grand success of community projects.
- Earned a 2-star Appreciation certificate for completing 13 leadership initiatives in society.

## SKILLS

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|---------------------------------|-------------------------------------|
| • Data Analysis & Visualization | • Machine Learning                  |
| • R studio                      | • SQL                               |
| • Stata                         | • Microsoft Office                  |
| • SPSS                          | • Volunteer and community mobilizer |
| • Tableau                       | • Interdepartmental coordinator     |
| • Python                        | • Innovator & entrepreneur          |
| • Deep Learning                 |                                     |

## AWARDS & HONOURS

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- Top 4 finalists for Inter-Institutional School of Diagnostic Innovation in Biodesign (SIB) Fellow: Program for building a next-generation pool of diagnostic innovators and entrepreneurs".

- Designated member of Indian Youth Delegation to China 2018 representing Indian youth on an international forum, organized by the Ministry of Youth Affairs & Sports, Government of India, and People's Republic of China.
- Reserved candidate for Commonwealth shared scholarship 2022 for the MSc Clinical Oncology Program at the University of Birmingham, London.
- Received Brown School Global Health Scholar Award
- Secured 1<sup>st</sup> Rank in Orthodontics and dentofacial orthopedics subject in 4<sup>th</sup> year BDS Professional examination in class.
- Distinction in 2 Subjects Orthodontics & dentofacial orthopedics and Prosthodontics & Implantology in the 4<sup>th</sup> year BDS Professional examination.
- Competed in Peoples Padma Quiz 2018 and was invited to the president's house to witness the Padma Award Ceremony.