Keshav Kumar

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PROFESSIONAL SUMMARY

Provisionally Certified in Public Health (CPH), with full certification pending upon graduation. An experienced and detail-oriented data analyst specialized in epidemiology and biostatistics, with a strong foundation in medical sciences. Proficient in R, Stata, SPSS, Tableau and skilled in applying deep learning and machine learning techniques with Python to conduct robust data analysis. Adept at advanced analytical methods and statistical software to manipulate and visualize large-scale datasets effectively. Skilled in crafting structured reports, maintaining websites, 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. Experienced in translational and implementation research, passionate about using data-driven approaches to address public health challenges and drive impactful solutions.

PROFESSIONAL EXPERIENCES

Center for Public Health Systems Science, MO, USA   Mar, 2023 – Present
Graduate Research Assistant
- Spreadheaded data collection, cleaning, and management of CDC's EHDI national data from 2007 to 2021 for 50 states and the District of Columbia.
- Developed and implemented a codebook and analysis plan of the collected data in the project.
- Performed statistical analysis to investigate the the impact of sociodemographic factors on infant hearing loss cases.
- Utilized R Studio to analyze and visualize state performance across 51 parameters, including existing and newly created variables from CDC data.
- Contributed to website design and maintenance, using shiny ensuring public accessibility of data and visualizations at https://ehdidata.wustl.edu/
- Presented a 2-hour instructional session at the EHDI Conference 2024 to disseminate project outcomes, with the manuscript currently in progress.

Toriola Lab, Department of Surgery, MO, USA   May, 2023 – Aug, 2023
Graduate Student
- Led translational and implementation clinical study investigating the association of amino acids, carbohydrates, energy, and peptides on mammographic breast density, with the manuscript currently in progress.
- The study highlights the role of dietary metabolites in breast cancer prevention strategies.
- Analyzed and applied advanced statistical tests on the cleaned and imputed metabolomics dataset.
- Created tables, examined the racial variation in breast density, and vizualized resutls.
- Coordinated DUET Clinical trial to recruit and consent participants.

University Advancement, WashU, MO, USA   Sep, 2022 – Mar, 2023
Engagement Ambassador
- Successfully spearheaded fundraising efforts for the university, leveraging their generous donation to achieve fundraising goals.
- Utilized 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 (HBCH&RC), Bihar, India. Feb, 2022 – Jun, 2022
District Technical Officer
- Led a 4-million population cancer screening program, organizing large-scale campaigns within the community to detect early-stage cancer for prompt intervention.
- Oversaw the collection, cleaning, and analysis of data for cancer registries, enhancing data quality and integrity for effective public health decisions.
- Developed structured reports and documentation for program monitoring, as well as program feedback reports based on monitoring and evaluation data.
- Demonstrated administrative and organizational abilities by managing follow-ups, administrative tasks, logistics, and inter/intra departmental coordination.
- 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
- Provided supervised patient care in COVID intensive care units and wards.
- Oversaw the data collection, cleaning, and management processes for a longitudinal clinical study, ensuring the accuracy and reliability of clinical data
- Delivered comprehensive cancer care in outpatient departments and wards under supervision within the Head and Neck oncology department.
- Assisted in various surgical procedures and evaluated new and follow-up oral cancer cases in the outpatient department.

Max7 Hospital, Bihar, India. Dec, 2020 – Mar, 2021
Resident
- Conducted patient assessment, provided supervised treatment and counselling in outpatient settings.
- Collected and analyzed patient data to support departmental seminars and research meetings, contributing to ongoing clinical improvements and knowledge sharing.
- Served as liaison for effective intra/interdepartmental coordianation
- 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
- Delivered patient treatment and care across all nine streams of dentistry, including the emergency department.
- Conducted comprehensive data collection, cleaning, and analysis for three research papers during my residency, leveraging SPSS to provide robust statistical insights.
- Performed various oral surgical procedures under supervision.
- Provided supervised COVID care while actively participating in preventive measures.
- Conducted oral health check-up camps throughout the district for oral cancer screening, alongside multiple tobacco cessation campaigns.

EDUCATION

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 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 (Provisional)   Mar 2024 – Present
CITI Program Certification course with Human Research   Sep 2022 – Present
HIPPA101 Privacy Compliance Training   Jul 2022 – Present

COMMITTEES & BOARDS

Cell to Society, Brown School, WashU   Sep 2023 – Dec 2024
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.

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.
- Executed 13 leadership projects addressing oral hygiene, mosquito-borne diseases, and other issues in underprivileged Varanasi communities.
- Promoted to Master Leader for successful community projects and received a 2-star appreciation certificate for 13 leadership initiatives.

SKILLS

- R studio
- Stata
- SPSS
- Tableau
- Python
- Deep Learning
- Machine Learning
- SQL
- Microsoft Office
- REDCap, GitHub

AWARDS & HONOURS

- 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.