Stanford



Amit Kaushal

Adjunct Professor, Bioengineering

Bio

BIO

Dr. Kaushal is Clinical Associate Professor of Medicine and Adjunct Professor of Bioengineering at Stanford University. He is a respected internal medicine physician with expertise in applications of computer science, artificial intelligence (AI), and machine learning (ML) to medicine and public health. He has worked in roles ranging from deeply technical to deeply clinical, in both academia and industry.

Dr. Kaushal brings over 20 years of research experience at the intersection of computer science and biomedicine. His work focuses on taking AI/ML applications from concept all the way through live clinical deployment, with attention to fair and ethical use of AI. His work has been featured in JAMA, Nature, Lancet Digital Health, NEJM AI, NEJM Catalyst Innovations in Care Delivery, Nature npj Digital Medicine, JAMA Network Open, Health Affairs Blog, and others; and he has been covered in popular media outlets such as Scientific American, Wired, STAT News, The Verge, LA Times, and more.

Dr. Kaushal launched Stanford University School of Engineering's undergraduate degree program in Biomedical Computation over 20 years ago; he serves as co-director of the major, which has graduated over 150 students since its founding. He is a faculty in the Stanford Center for Artificial Intelligence in Medicine and Imaging, Stanford Institute for Human-Centered Artificial Intelligence, Stanford Clinical Excellence Research Center, and Stanford Partnership for AI-Assisted Care.

Dr. Kaushal practices hospital medicine at VA Palo Alto, where he also serves as inaugural Director of the Amplified Reach Catalyst (ARC) Program, an embedded research-support infrastructure for VA hospitalist clinicians.

Dr. Kaushal has served in executive, operating, and advisory roles in industry.

Dr. Kaushal is board certified in both internal medicine and clinical informatics. He completed his BS (Biomedical Computation), MD, PhD (Biomedical Informatics) and Internal Medicine residency training all at Stanford University.

ACADEMIC APPOINTMENTS

- Faculty Affiliate, Institute for Human-Centered Artificial Intelligence (HAI)

ADMINISTRATIVE APPOINTMENTS

- Co-director/Executive Director, Biomedical Computation Major, (2003- present)
- Faculty Executive Committee, Stanford Partnership for AI-Assisted Care (PAC), (2019- present)
- Inaugural Director, Amplified Reach Catalyst (ARC) Program, VA Palo Alto, (2021- present)

HONORS AND AWARDS

- Recipient, Paul and Daisy Soros Fellowship

PROFESSIONAL EDUCATION

- Residency, Stanford University , Internal Medicine
- PhD, Stanford University , Biomedical Informatics
- MD, Stanford University
- BS, Stanford University , Biomedical Computation

Teaching

COURSES

2025-26

- AI-Assisted Care: BIOE 277, CS 337, MED 277, PSYC 278 (Aut)

2024-25

- AI-Assisted Care: CS 337, MED 277 (Aut)

Publications

PUBLICATIONS

- **Optimizing Enterprise Referral Processing through Automated Fax Triage** *NEJM CATALYST INNOVATIONS IN CARE DELIVERY*
  Mui, D., Tran, J. L. A., Onofre, S., Ramirez, S., Singh, V., Lago, A., Ng-Thow-Hing, J., Lavertu, A., Kaushal, A., Altman, R., Pallas, J., Boosi, S., Gohil, et al
  2026; 7 (5)
- **The Digital Health Competencies in Medical Education Framework: An International Consensus Statement Based on a Delphi Study.** *JAMA network open*
  Car, J., Ong, Q. C., Erlikh Fox, T., Leightley, D., Kemp, S. J., Švab, I., Tsoi, K. K., Sam, A. H., Kent, F. M., Hertelendy, A. J., Longhurst, C. A., Powell, J., Hamdy, et al
  2025; 8 (1): e2453131
- **Geographic Distribution of US Cohorts Used to Train Deep Learning Algorithms.** *JAMA*
  Kaushal, A. n., Altman, R. n., Langlotz, C. n.
  2020; 324 (12): 1212–13
- **Wiring Minds Successfully applying AI to biomedicine requires innovators trained in contrasting cultures** *NATURE*
  Kaushal, A., Altman, R. B.
  2019; 576 (7787): S62–S63
- **Beyond duty hours: leveraging large-scale paging data to monitor resident workload** *NPJ DIGITAL MEDICINE*
  Kaushal, A., Katznelson, L., Harrington, R. A.
  2019; 2: 87
- **Optimizing Enterprise Referral Processing through Automated Fax Triage.** *NEJM catalyst innovations in care delivery*
  Mui, D., Tran, J. L., Onofre, S., Ramirez, S., Singh, V., Lago, A., Ng-Thow-Hing, J., Lavertu, A., Kaushal, A., Altman, R., Pallas, J., Boosi, S., Gohil, et al
  2026; 7 (5): CAT250273
- **Hospitalist perceptions of health equity in the inpatient setting: A multisite mixed-methods study.** *Journal of hospital medicine*
  Le, E., Kara, A., Woodruff, A., Readlynn, J. K., Kaushal, A., Burden, M., Eniasivam, A., Allaudeen, N., Gershanik, E., Jenkins, A.
  2025
- **Quantifying the Relationship Between Renal Function and Procalcitonin: A Study of 14 431 Blood Cultures.** *Open forum infectious diseases*

Park, A. K., Nakasone, T. S., Kaushal, A., Renault, C.
2025; 12 (11): ofaf654

- **Red teaming ChatGPT in medicine to yield real-world insights on model behavior.** *NPJ digital medicine*
  Chang, C. T., Farah, H., Gui, H., Rezaei, S. J., Bou-Khalil, C., Park, Y. J., Swaminathan, A., Omiye, J. A., Kolluri, A., Chaurasia, A., Lozano, A., Heiman, A., Jia, et al
  2025; 8 (1): 149
- **Developing ICU Clinical Behavioral Atlas Using Ambient Intelligence and Computer Vision.** *NEJM AI*
  Dai, W., Adeli, E., Luo, Z., Dash, D., Lakshmikanth, S., Durante, Z., Tang, P., Kaushal, A., Milstein, A., Fei-Fei, L., Schulman, K.
  2025; 2 (2)
- **Comparing Single-Hospital and National Models to Predict 30-Day Inpatient Mortality.** *Journal of general internal medicine*
  Cogill, S., Heberer, K., Kaushal, A., Fang, D., Lee, J.
  2025
- **Repurposing Biomedical Informaticians for COVID-19.** *Journal of biomedical informatics*
  Sosa, D. N., Chen, B., Kaushal, A., Lavertu, A., Lever, J., Rensi, S., Altman, R.
  2021: 103673
- **Ethical issues in using ambient intelligence in health-care settings.** *The Lancet. Digital health*
  Martinez-Martin, N., Luo, Z., Kaushal, A., Adeli, E., Haque, A., Kelly, S. S., Wieten, S., Cho, M. K., Magnus, D., Fei-Fei, L., Schulman, K., Milstein, A.
  2020
- **Can Contact Tracing Work At COVID Scale?**
  Kaushal, A., Altman, R.
  Health Affairs Blog.
  2020
- **Inference for longitudinal data with nonignorable nonmonotone missing responses** *COMPUTATIONAL STATISTICS & DATA ANALYSIS*
  Sinha, S. K., Kaushal, A., Xiao, W.
  2014; 72: 77-91
- **Trauma-associated human neutrophil alterations revealed by comparative proteomics profiling** *PROTEOMICS CLINICAL APPLICATIONS*
  Zhou, J., Krovvidi, R. K., Gao, Y., Gao, H., Petritis, B. O., De, A. K., Miller-Graziano, C. L., Bankey, P. E., Petyuk, V. A., Nicora, C. D., Clauss, T. R., Moore, R. J., Shi, et al
  2013; 7 (7-8): 571-583
- **Determination of Burn Patient Outcome by Large-Scale Quantitative Discovery Proteomics** *CRITICAL CARE MEDICINE*
  Finnerty, C. C., Jeschke, M. G., Qian, W., Kaushal, A., Xiao, W., Liu, T., Gritsenko, M. A., Moore, R. J., Camp, D. G., Moldawer, L. L., Elson, C., Schoenfeld, D., Gamelli, et al
  2013; 41 (6): 1421-1434
- **Genomic responses in mouse models poorly mimic human inflammatory diseases** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Seok, J., Warren, H. S., Cuenca, A. G., Mindrinos, M. N., Baker, H. V., Xu, W., Richards, D. R., McDonald-Smith, G. P., Gao, H., Hennessy, L., Finnerty, C. C., Lopez, C. M., Honari, et al
  2013; 110 (9): 3507-3512
- **The Mouse Blood-Brain Barrier Transcriptome: A New Resource for Understanding the Development and Function of Brain Endothelial Cells** *PLOS ONE*
  Daneman, R., Zhou, L., Agalliu, D., Cahoy, J. D., Kaushal, A., Barres, B. A.
  2010; 5 (10)
- **A universal carrier test for the long tail of Mendelian disease** *REPRODUCTIVE BIOMEDICINE ONLINE*
  Srinivasan, B. S., Evans, E. A., Flannick, J., Patterson, A. S., Chang, C. C., Pham, T., Young, S., Kaushal, A., Lee, J., Jacobson, J. L., Patrizio, P.
  2010; 21 (4): 537-551
- **Plasma Proteome Response to Severe Burn Injury Revealed by O-18-Labeled "Universal" Reference-Based Quantitative Proteomics** *JOURNAL OF PROTEOME RESEARCH*

Qian, W., Petritis, B. O., Kaushal, A., Finnerty, C. C., Jeschke, M. G., Monroe, M. E., Moore, R. J., Schepmoes, A. A., Xiao, W., Moldawer, L. L., Davis, R. W., Tompkins, R. G., Herndon, et al

2010; 9 (9): 4779-4789

- **Knowledge-based analysis of microarrays for the discovery of transcriptional regulation relationships** *8th Asia Pacific Bioinformatics Conference*

  Seok, J., Kaushal, A., Davis, R. W., Xiao, W.

  BIOMED CENTRAL LTD.2010

- **Shotgun proteomics identifies proteins specific for acute renal transplant rejection** *PROTEOMICS CLINICAL APPLICATIONS*

  Sigdel, T. K., Kaushal, A., Gritsenko, M., Norbeck, A. D., Qian, W., Xiao, W., Camp, D. G., Smith, R. D., Sarwal, M. M.

  2010; 4 (1): 32-47

- **Large-Scale Multiplexed Quantitative Discovery Proteomics Enabled by the Use of an O-18-Labeled "Universal" Reference Sample** *JOURNAL OF PROTEOME RESEARCH*

  Qian, W., Liu, T., Petyuk, V. A., Gritsenko, M. A., Petritis, B. O., Polpitiya, A. D., Kaushal, A., Xiao, W., Finnerty, C. C., Jeschke, M. G., Jaitly, N., Monroe, M. E., Moore, et al

  2009; 8 (1): 290-299

- **A transcriptome database for astrocytes, neurons, and oligodendrocytes: A new resource for understanding brain development and function** *JOURNAL OF NEUROSCIENCE*

  Cahoy, J. D., Emery, B., Kaushal, A., Foo, L. C., Zamanian, J. L., Christopherson, K. S., Xing, Y., Lubischer, J. L., Krieg, P. A., Krupenko, S. A., Thompson, W. J., Barres, B. A.

  2008; 28 (1): 264-278

- **High dynamic range characterization of the trauma patient plasma proteome** *MOLECULAR & CELLULAR PROTEOMICS*

  Liu, T., Qian, W., Gritsenko, M. A., Xiao, W., Moldawer, L. L., Kaushal, A., Monroe, M. E., Varnum, S. M., Moore, R. J., Purvine, S. O., Maier, R. V., Davis, R. W., Tompkins, et al

  2006; 5 (10): 1899-1913