Stanford

Joshua Isaac Leaston, BS

MD Student with Scholarly Concentration in Bioengineering / Neuroscience, Behavior, and Cognition, expected graduation Spring 2026

Bio

BIO

Joshua Isaac Leaston is a MD candidate with a concentration in bioengineering and application in Neuroscience, behavior, and cognition in the Stanford University School of Medicine. A member of the entering class of 2021, Joshua holds a degree in Neuroscience with a minor in Health Science and has received various academic excellence awards and scholarships.

His research interests include the development of quantitative neuroimaging methodologies for neurosurgical and radiological outcome improvement. He has also received a research fellowship from a Boston based neuroimaging organization and MedScholars funding for his research on neuroimaging methodologies. This is further augmented by a Stanford-based seed grant, enabling him to delve into the investigation of disparities in outcomes of image-guided procedures within high-risk patient populations nationwide.

In addition to his academic pursuits, he is also the co-founder of a company focused on addressing disparities in skin cancer through advanced imaging, which has been recognized through the Stanford Biodesign NEXT award and eWEAR.

Further, he is dedicated to raising awareness around the intersectionality between the unhoused community and medicine. Joshua co-founded a nonprofit dedicated to supporting unhoused individuals, where he has raised funding to sustainably support the cause since 2019.

Joshua has also demonstrated his dedication to advancing science and medicine through several presentations, including a talk at Tufts Medicine on barriers in medical school enrollment for minorities and a presentation at Northeastern University on "How to Build a Nonprofit." He has presented at conferences such as Rise, KTGF, SPINE, RSNA, ACR, ASNR, AANS, ISMRM, and the AMEC-SNMA conference, and has published in peer-reviewed journals.

In conclusion, Joshua Isaac Leaston's academic excellence, research contributions, and dedication to social causes showcase his strong potential to become a compassionate and impactful physician scientist.

EDUCATION AND CERTIFICATIONS

- Bachelor of Science, Northeastern University (2020)
- Bachelor of Science, Northeastern University , Neuroscience (2020)

Publications

PUBLICATIONS

- **Opioid usage in lumbar disc herniation patients with nonsurgical, early, and late surgical treatments.** *World neurosurgery*
  Zhou, Z., Jin, M. C., Jensen, M. R., Barros Guinle, M. I., Ren, A., Agarwal, A. A., Leaston, J., Ratliff, J. K.
  2023

- **Quantitative neuroimaging biomarkers using 3D UTE MRI and ferumoxytol** *International Society for Magnetic Resonance in Medicine*
  Gharagouzloo, C., Kulkarni, P., Leaston, J., Johnson, K., Polimeni, J., Qiao, J., Han, M., Larson, P., Ferris, C.
  2023

- **Treating mild repetitive mild head injury with a vasopressin V1a receptor antagonist: evidence of suppressed microglia activation and regional cerebral blood volume** *Under Review*
  Bens, N., Leaston, J., Kulkarni, P., Hightower, R., Prom, S., O'Hare, N., Ebong, E., Simon, N., Brownstein, M., Gharagouzloo, C., Ferris, C.
  2023

- **Do We Swallow the Waste From Our Brain?** *Frontiers in neuroscience*
  Leaston, J., Kulkarni, P., Gharagouzloo, C., Qiao, J., Bens, N., Ferris, C. F.
  2021; 15: 763780

- **Quantitative Imaging of Blood-Brain Barrier Permeability Following Repetitive Mild Head Impacts.** *Frontiers in neurology*
  Leaston, J., Qiao, J., Harding, I. C., Kulkarni, P., Gharagouzloo, C., Ebong, E., Ferris, C. F.
  2021; 12: 729464

- **Neurovascular imaging with QUTE-CE MRI in APOE4 rats reveals early vascular abnormalities.** *PloS one*
  Leaston, J., Ferris, C. F., Kulkarni, P., Chandramohan, D., van de Ven, A. L., Qiao, J., Timms, L., Sepulcre, J., El Fakhri, G., Ma, C., Normandin, M. D., Gharagouzloo, C.
  2021; 16 (8): e0256749

- **Health-Related Outcomes of Image-Guided and Non-Image-Guided Lumbar Punctures in Diverse Patient Populations** *American Society of Neuroradiology*
  Leaston, J., Nguyen, H., Agarwal, A. A., Iv, M.
  2024

- **Lumbar puncture outcomes in children with psychiatric history**
  Leaston, J., Alananzeh, R., Abuhasan, Y., Al-Hajjiri, H., Agarwal, A. A.
  2024

- **Analyzing the Impact of Educational Funding on Adolescent Mental Health: Correlations with Anxiety, Depression, and Suicide Rates in the United States**
  Alananzeh, R., Al-Hajjiri, H., Abuhasan, Y., Leaston , J.
  2024

- **Psychological Health Outcomes of Unhoused Adolescents: A Rapid Review of Descriptive Epidemiology** *Klingenstein Third Generation Foundation*
  Alananzeh, R., Abuhasan, Y., Al-Hajjiri, H., Etemadi, M., Masri, S., Maaita, H., Constantin, V., Leaston, J.
  2023

- **Evaluating Comorbidity Index Performance in Patients Undergoing Spinal Fusion Procedures Stratified by Race** *American Association of Neurological Surgeons*
  Leaston, J., Mittal, A., Jin, M., Dadey, D., Ratliff, J.
  2023

- **Assessing the impact of patient's neighborhood on the ability of comorbidity scores to predict reoperation probability** *Spine Summit*
  Leaston, J., Mittal, A., Jin, M., Dadey, D., Ratliff, J.
  2023

- **Spinal decompression outcomes in children with psychiatric consultation history** *Klingenstein Third Generation Foundation*
  Leaston, J., Kishore, A.
  2023

- **TrueTone: A Digital Solution for Personalized Sunscreen Based on Your Skin Type** *eWEAR Annual Meeting Symposium 2023*

Leaston, J.

2023

- **Predicting neurodevelopmental outcomes in premature infants with deep learning** *37th Stanford Medical Student Research Symposium*

  Leaston, J., Yeom, K.

  2022

PRESENTATIONS

- Barriers in Medical School Enrollment for Minorities

- How to Build a Nonprofit