

# Jonathan Huang

860-707-2003 | [jonathan.huang@northwestern.edu](mailto:jonathan.huang@northwestern.edu) | 401 E Ontario St. Apt 506, Chicago, IL, 60611

## EDUCATION

---

### Northwestern University Feinberg School of Medicine

Chicago, IL

*Medical Scientist Training Program*

2020 -

- MD/PhD Candidate in Biomedical Engineering
- Advisor: Mozziyar Etemadi, MD PhD

### Brown University

Providence, RI

*Bachelor of Science, Neuroscience and Computer Science*

2016 - 2020

- GPA: 4.0
- Graduated with Honors in Neuroscience

## AWARDS & HONORS

---

- John P. Donoghue Prize in Neuroscience, Brown University 2020
- Sigma Xi, Elected 2020
- Karen T. Romer Undergraduate Teaching and Research Award, Brown University 2019
- National Merit Scholarship 2016

## PROFESSIONAL EXPERIENCE

---

### Medical Scribe

April 2019 - May 2020

*Brown Emergency Medicine*

Providence, RI

- Documented patient encounters for Emergency Department providers

## RESEARCH EXPERIENCE

---

### Research Assistant | Healthcare Integrated Technologies Lab, Northwestern Medicine

2020 -

- Development, implementation, and prospective evaluation of clinical machine learning tools relating to vision/language tasks in radiology and ophthalmology under the supervision of Dr. Mozziyar Etemadi

### Research Assistant | Barnea Lab, Brown University

2018 - 2020

- Honors thesis: "Genetic Targeting of Precise Intersectional Neuronal Populations Using *trans*-Tango" under the supervision of Dr. Gilad Barnea

## TEACHING EXPERIENCE

---

### Teaching Assistant | NEUR 1030: Neural Systems

Fall 2018 & 2019

*Department of Neuroscience, Brown University*

### Teaching Assistant | CSCI 0220: Introduction to Discrete Structures and Probability

Spring 2019

*Department of Computer Science, Brown University*

## LEADERSHIP EXPERIENCE

---

- President** | Writes of Passage 2020-2022
- Founded and led a Feinberg student group focused on medical journalism and outreach for medical professionals
- President** | Neurological Surgery Interest Group 2021-2022
- Led a group of Feinberg students interested in neurosurgery by planning events and learning opportunities

## GRANT FUNDING

---

- Investigator** | “Physician Attitudes Towards Artificial Intelligence and Result Management” 2022  
*Center for Bioethics and Medical Humanities & Institute for Augmented Intelligence in Medicine*

## PUBLICATIONS

---

### Peer-Reviewed Original Research:

1. **Huang J**, Galal G, Mukhin V, Etemadi M, Tanna A. Prediction and detection of glaucomatous visual field progression using deep learning on macular OCT. *Journal of Glaucoma*. doi:[10.1097/IJG.0000000000002359](https://doi.org/10.1097/IJG.0000000000002359)
2. **Huang J**, Neill L, Wittbrodt W, et al. Generative Artificial Intelligence for Chest Radiograph Interpretation in the Emergency Department. *JAMA Network Open*. 2023;6(10):e2336100. doi:[doi:10.1001/jamanetworkopen.2023.36100](https://doi.org/10.1001/jamanetworkopen.2023.36100)
3. Domingo J, Galal G, **Huang J**, Soni P, Mukhin V, et al. Preventing Delayed and Missed Care by Applying Artificial Intelligence to Trigger Relevant Imaging Follow-Up. *NEJM Catalyst Innovations in Care Delivery*. 2022;3(4). doi:[10.1056/CAT.21.0469](https://doi.org/10.1056/CAT.21.0469)
4. **Huang J**, Basith S, Patel S, Weisman A, Brickman W, Mets M, Mets-Halgrimson R. Ocular Findings in Pediatric Turner Syndrome. *Ophthalmic Genetics*. 2022. 2022 Apr 5;1-4. doi:[10.1080/13816810.2022.2045512](https://doi.org/10.1080/13816810.2022.2045512)
5. **Huang J**, Rossen J, Rahmani B, Mets-Halgrimson R. Pediatric Eyelid and Canalicular Lacerations: Epidemiology and Outcomes. 2022 Apr 21;1-7. *Journal of Pediatric Ophthalmology and Strabismus*. doi:[10.3928/01913913-20220321-02](https://doi.org/10.3928/01913913-20220321-02)

### Review Articles:

1. Alleman K, Knecht E, **Huang J**, Zhang L, Lam S, DeCuyper M. Multimodal Deep Learning-Based Prognostication in Glioma Patients: A Systematic Review. *Cancers*. 2023;15(2):545. doi:[10.3390/cancers15020545](https://doi.org/10.3390/cancers15020545)
2. Shlobin NA, **Huang J**, Wu C. Learning curves in robotic neurosurgery: a systematic review. *Neurosurgical Review*. 2023;46(1):1-23. doi:[10.1007/s10143-022-01908-y](https://doi.org/10.1007/s10143-022-01908-y)
3. Huang BB, **Huang J**, Swong KN. Natural Language Processing in Spine Surgery: A Systematic Review of Applications, Bias, and Reporting Transparency. *World Neurosurgery*. 2022;167:156-164. doi:[10.1016/j.wneu.2022.08.109](https://doi.org/10.1016/j.wneu.2022.08.109)
4. Shlobin NA, **Huang J**, Lam SK. Health Literacy in Neurosurgery: A Scoping Review. *World Neurosurgery*. 2022;166:71-87. doi:[10.1016/j.wneu.2022.07.023](https://doi.org/10.1016/j.wneu.2022.07.023) doi:[10.1038/s41394-022-00527-5](https://doi.org/10.1038/s41394-022-00527-5)

5. **Huang J**, Galal G, Etemadi M, Vaidyanathan M. Evaluation and Mitigation of Racial Bias in Clinical Machine Learning Models: A Scoping Review. *JMIR Medical Informatics*. 2022;10(5). doi:[10.2196/36388](https://doi.org/10.2196/36388)
6. **Huang J**, Shlobin NA, DeCuyper M, Lam SK. Deep Learning for Outcome Prediction in Neurosurgery: A Systematic Review of Design, Reporting, and Reproducibility. *Neurosurgery*. 2022;90(1):16-38. doi:[10.1227/NEU.0000000000001736](https://doi.org/10.1227/NEU.0000000000001736)
7. **Huang J**, Shlobin NA, Lam SK, DeCuyper M. Artificial Intelligence Applications in Pediatric Brain Tumor Imaging: A Systematic Review. *World Neurosurgery*. 2022;157:99-105. doi:[10.1016/j.wneu.2021.10.068](https://doi.org/10.1016/j.wneu.2021.10.068)
8. **Huang J**, Rabin EE, Stricsek G, Swong KN. Outcomes and Complications of Minimally Invasive Transforaminal Lumbar Interbody Fusion in the Elderly: A Systematic Review and Meta-Analysis. *Journal of Neurosurgery: Spine*. 2021;12:1-12. doi:[10.3171/2021.7.SPINE21829](https://doi.org/10.3171/2021.7.SPINE21829)

### **Case Reports:**

1. LoPresti MA, **Huang J**, Shlobin NA, Curry DJ, Weiner HL, Lam SK. Vagus nerve stimulator revision in pediatric epilepsy patients: a technical note and case series. *Child's Nervous System*. 2022. doi:[10.1007/s00381-022-05769-0](https://doi.org/10.1007/s00381-022-05769-0)
2. **Huang J**, Murthy KN, Franz C, Samet J, Deshmukh S, Swong KN. Anterior Interosseous Nerve Neuropathy in a Patient with Spinal Cord Injury: Case Report and Literature Review. *Spinal Cord Series and Cases*. 2022;8(1):61.

### **Oral Presentations:**

1. **Huang J**, Rabin EE, Chandrasekar S, Selner AN, Swong KN. Utility of Intraoperative Neuromonitoring in Minimally Invasive Posterior Lumbar Fusion. *Spine Summit 2022*. Las Vegas, NV. Feb 2022.
2. **Huang J**, Rabin EE, Swong KN. Outcomes and Complications of Minimally Invasive Transforaminal Lumbar Interbody Fusion in the Elderly: A Systematic Review and Meta-Analysis. *SMISS Annual Forum 2021*. Las Vegas, NV. Oct 2021.

### **Peer-Reviewed Abstracts:**

1. Rabin EE, Mi X, **Huang J**, Kim M, Mozny A, Amidei C, Sieg E, Li X, Bell A, Zhai L, Bommi P, Lauing KL, Lukas RV, Wainwright DA. Age-Stratified Survival Analyses of Pharmacological Treatments in Patients with Glioblastoma. *Society for Neuro-Oncology Annual Meeting 2022*. Toronto, Canada. August 2022.
2. Rabin EE, Mi X, **Huang J**, Kim M, Mozny A, Amidei C, Sieg E, Li X, Bell A, Zhai L, Bommi P, Lauing KL, Lukas RV, Wainwright DA. Age-Stratified Survival Analyses of Co-Morbidities in Patients with Glioblastoma. *Society for Neuro-Oncology Annual Meeting 2022*. Toronto, Canada. August 2022.
3. **Huang J**, Konopek N, Moonjely J, Fawzi A. Semi-Automated Blood Velocity Determination Using Adaptive Optics Scanning Laser Ophthalmoscopy XT Images. *ARVO 2022 Annual Meeting*. Denver, CO. May 2022.
4. **Huang J**, Rabin E, Chandrasekar S, Swong K. Minimally Invasive Transforaminal Lumbar Interbody Fusion in Elderly Patients. *American Association of Neurological Surgeons Annual Scientific Meeting*. Philadelphia, PA. April 2022.

5. **Huang J**, Rabin E, Chandrasekar S, Shlobin N, Swong K. Impact of Resident Involvement in Minimally Invasive Transforaminal Lumbar Interbody Fusion. *American Association of Neurological Surgeons Annual Scientific Meeting*. Philadelphia, PA. April 2022.
6. Ellis E, **Huang J**, Drumm M, Rai S, Yerneni K, et al. Risk Factors for Postoperative Seizures and Long-Term AED Use following Meningioma Resection. *American Association of Neurological Surgeons Annual Scientific Meeting*. Philadelphia, PA. April 2022.
7. Gajjar A, **Huang J**, Shlobin N, Le A, Jain A, Dahdaleh N. Top Social Media Influencers in Neurosurgery: An Analysis of Twitter Data. *American Association of Neurological Surgeons Annual Scientific Meeting*. Philadelphia, PA. April 2022.
8. **Huang J**, Rossen J, Rahmani B, Mets-Halgrimson R. Pediatric Eyelid and Canalicular Lacerations: Epidemiology and Outcomes, *AAPOS 2022 Annual Meeting*. Scottsdale, AZ. Mar 2022.
9. Nadimpalli S, **Huang J**, Ralay-Ranaivo H, Mets-Halgrimson R. Association of Fusional Amplitudes with Surgical Outcomes in Pediatric Strabismus, *AAPOS 2022 Annual Meeting*. Scottsdale, AZ. Mar 2022.
10. Kim E, Stec M, Shaikh N, **Huang J**, Ralay Ranaivo H, Mets-Halgrimson R. Refractive Changes in Children in the Chicagoland Area during the COVID-19 Pandemic. *AAPOS 2022 Annual Meeting*. Scottsdale, AZ. Mar 2022.
11. Domingo JE, Soni P, Galal GO, Mukhin V, **Huang J** et al. Natural Language Processing for Detection and Reporting of Findings Requiring Follow-Up in Radiology Reports. *Diagnostic Error in Medicine 14th Annual International Conference*. Virtual Conference, Oct 2021.
12. **Huang J**, Shlobin NA, DeCuypere M, Lam SK. Deep Learning for Outcome Prediction in Neurosurgery: A Systematic Review. *American Association of Neurological Surgeons Annual Scientific Meeting*. Orlando, FL. Aug 2021.
13. **Huang J**, LoPresti MA, Shlobin NA, Lam SK. Vagus Nerve Stimulator Revision in Pediatric Epilepsy Patients: A Case Series. *American Association of Neurological Surgeons Annual Scientific Meeting*. Orlando, FL. Aug 2021.