ADRIAN CELAYA

+1 (956) 346-6109 | aecelaya@rice.edu | https://aecelaya.github.io

EDUCATION

Rice University **2026 (expected)**
Ph.D. Computational and Applied Mathematics Houston, TX
Advisors: Beatrice Riviere and David Fuentes

Rice University **2023 (expected)**
M.A. Computational and Applied Mathematics Houston, TX
Advisors: Beatrice Riviere and David Fuentes

Rice University **May 2016**
B.A. Computational and Applied Mathematics Houston, TX
Overall GPA: 3.70/4.00

PROFESSIONAL EXPERIENCE

Research Assistant **Sept. 2020 - July 2021**
MD Anderson Cancer Center, Advisor: David Fuentes Houston, TX

- Developed novel, computationally efficient deep learning architectures for 3D medical image segmentation and classification
- Created Docker images for containerizing complex neuroimaging analysis pipelines, allowing the work of previous researchers to be easily integrated into ongoing and future projects
- Mentored two summer students through the Cancer Prevention & Research Institute of Texas (CPRIT)-CURE Summer Undergraduate Program

Information System Security Manager **Aug. 2016 - Aug. 2020**
U.S. Navy, USS Carl Vinson San Diego, CA

- Led a team of 9 highly talented cybersecurity analysts who oversaw the security and integrity of a $20,000,000 computer network consisting of roughly 4,000 assets with zero intrusions or major incidents
- Implemented a comprehensive network security program that resulted in the organization′s highest ever cybersecurity score when evaluated by external security auditors
- Received extensive training on computer and communication networks, cryptographic key management, and computer network defense

GRANTS AND FELLOWSHIPS

Loewenstern Fellowship **Aug. 2021 - Oct. 2022**
Rice University Houston, TX

PEER-REVIEWED PUBLICATIONS

1. **Celaya, A.**, Actor, J. A., Muthusivarajan, R., Gates, E., Chung, C., Schellingerhout, D., Riviere, B, and Fuentes, D. PocketNet: A Smaller Neural Network for 3D Medical Image Analysis. *Under review*, 2021

2. Muthusivarajan, R., **Celaya, A.**, Yung, J., Chung, C., and Fuentes, D. Correlation Between Image Quality Metrics of Magnetic Resonance Images and Neural Network Segmentation Accuracy. *Under review*, 2021

3. Gates, E., **Celaya, A.**, Suki, D., Schellingerhout, D., and Fuentes, D. Technical Note: An efficient MR image data quality screening dashboard. *Under review*, 2021

4. Gates, E., Suki, D., **Celaya, A.**, Weinberg, J., Prabhu, S., Sawaya, R., Huse, J., Long, J., Fuentes, D., and Schellingerhout, D. Cellular Density in Adult Glioma, estimated with MR imaging data, has prognostic power approaching WHO histological grading in a cohort of 1,181 patients. *Under review*, 2021

CONFERENCE PRESENTATIONS

1. **Celaya, A.**, Actor, J. A., Muthusivarajan, R., Gates, E., Chung, C., Schellingerhout, D., Riviere, B, and Fuentes, D. Small Convolutional Neural Networks for Efficient 3D Medical Image Segmentation. Oral Presentation, 63rd American Association of Physicists in Medicine Annual Meeting, virtual, July 2021

2. Gates, E., **Celaya, A.**, Suki, D., Weinberg, J., Prabhu, S., Fuentes, D., and Schellingerhout, D. Imaging Based Prediction of Proliferative Foci as a Target for Surgical Intervention Across Glioma Grades., John R. Cameron Early-Career Investigator Symposium, 63rd American Association of Physicists in Medicine Annual Meeting, virtual, July 2021

3. Gates, E., **Celaya, A.**, Schellingerhout, D., and Fuentes, D., Automated Cerebrospinal Fluid ROI Selection on Brain Magnetic Resonance Images. Poster, Keck annual conference, virtual, October 2020

HONORS AND AWARDS

Navy Marine Corps Commendation Medal **Aug. 2020**
U.S. Navy San Diego, CA

President's Honor Roll **May 2016**
Rice University Houston, TX

SKILLS

Languages Spoken: English (native), Spanish (conversant)
Programming Languages and Software: Python, Matlab, C/C++, TensorFlow, Keras, Docker, LaTeX

Last updated: November 2021