Jacob Reinhold

Curriculum Vitae

January 2020

jacob.reinhold@jhu.edu
jcreinhold.github.io
github.com/jcreinhold
gitlab.com/jcreinhold

Education and Qualifications

Expected May 2022	Johns Hopkins University Ph.D., Electrical Engineering
December 2019	Johns Hopkins University M.S.E., Electrical Engineering
December 2016	The University of Texas at Austin B.S., Electrical Engineering

Research Experience

Aug 2017 – Present	**Johns Hopkins University** *Graduate Research Assistant* Research anomaly detection, image segmentation, and image translation in structural MR and CT images
Nov 2014 – Jun 2017	**Applied Research Laboratories, The University of Texas at Austin** *Engineering Scientist Associate* Investigate the effect of ionospheric activity on radio wave propagation
May 2016 – Aug 2016	**Biomedical Informatics Lab, The University of Texas at Austin** *Undergraduate Research Assistant* Researched performance of stereo-viewed radiological images in lesion detection

Journal Articles

1. B. Dewey, C. Zhao, J. Reinhold, A. Carass, K. Fitzgerald, E. Sotirchos, S. Saidha, J. Oh, D. Pham, P. Calabresi, P. van Zijl, J. Prince. "DeepHarmony: A deep learning approach to contrast harmonization across scanner changes." Magnetic resonance imaging (2019).
2. G. Wen, H. Chang, J. Reinhold, J. Lo, M. Markey. "Virtual assessment of stereoscopic viewing of digital breast tomosynthesis projection images." Journal of Medical Imaging 5, no. 1 (2018): 015501.

Conference Proceedings

1. J. Reinhold, Y. He, Y. Chen, D. Gao, J. Lee, J. Prince, A. Carass. "Validating uncertainty in medical image translation." 2020 IEEE 17th International Symposium on Biomedical Imaging (ISBI 2020). IEEE, 2020. *To appear*.
2. J. Reinhold, Y. He, Y. Chen, D. Gao, J. Lee, J. Prince, A. Carass. "Finding novelty with uncertainty." Medical Imaging 2020: Image Processing, International Society for Optics and Photonics, 2020. *To appear*.
3. J. Sager, R. Shankar, J. Reinhold, A. Venkataraman, "VESUS: A crowd-annotated database to study emotion production and perception in spoken english." Proceedings of the Annual Conference of the International Speech Communication Association, INTERSPEECH. 2019.

4. J. Reinhold, B. Dewey, A. Carass, J. Prince. “Evaluating the impact of intensity normalization on MR image synthesis.” In Medical Imaging 2019: Image Processing, vol. 10949, p. 109493H. International Society for Optics and Photonics, 2019.
5. J. Reinhold, G. Wen, J. Lo, M. Markey. “Lesion detectability in stereoscopically viewed digital breast tomosynthesis projection images: a model observer study with anthropomorphic computational breast phantoms.” In Medical Imaging 2017: Image Perception, Observer Performance, and Technology Assessment, vol. 10136, p. 101360W. International Society for Optics and Photonics, 2017.
6. T. Gaussiran, R. Calfas, A. Fleischmann, D. Munton, D. Rainwater, and J. Reinhold, “HF Signal Geolocation vs. Ionospheric Structure: An Engineering Solution Approach”, Ionospheric Effects Symposium, May 2015, Alexandria, VA. Presented by: D. Rainwater.

Awards

2017–2018	Ferdinand Hamburger Jr. Fellowship
2016	Raytheon-SVA Scholarship
2016	Frederic and Julia Weigl Scholarship
2015	Jean Perkins Combat Veteran Scholarship
2014–2015	Jerry A. and Martha Lel Hawkins Endowed Scholarship
2016	Nominated for Texas Exes Presidential Leadership Award
	Member of Eta Kappa Nu – Electrical Engineering Honor Society

Professional Experience

Feb 2010 – Oct 2015 **United States Marine Corps Reserves**
Platoon Sergeant
Meritoriously promoted to manage and advise over 20 junior Marines

May 2014 – Aug 2014 **Advanced Micro Devices, Inc.**
Co-op Engineer
Developed tests to validate memory on in-development microprocessor

Skills

Programming Languages:	Python, Julia, C
Tools:	Linux/Unix, Git, LaTeX, MATLAB, Mathematica, Docker, Singularity

Talks

Apr 2016 “Soap Films and Minimal Surfaces”, Student presentation for Spring 2016 Directed Reading Program in Mathematics