JACOB REINHOLD

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EDUCATION

Johns Hopkins University M.S.E., Electrical and Computer Engineering — December 2019
GPA: 3.74/4.00

The University of Texas at Austin B.S., Electrical Engineering — December 2016
GPA: 3.75/4.00

EXPERIENCE

Image Analysis and Communication Lab, JHU – *Research Assistant* — Jan. 2018 – Present
- Improved tracking of disease progression in multiple sclerosis in collaboration with clinicians by developing novel machine learning algorithms; improved the extraction of statistics for disease-related lesions in brain images
- Published three peer-reviewed conference papers and co-authored one journal article on machine learning
- Created and maintained open-source software for medical image processing (100+ stars, 30+ forks on Github)
- Accepted into the competitive Ph.D. program and qualified by completing several oral and written technical tests

Neural Systems Analysis Lab, JHU – *Research Assistant* — Aug. 2017 – Dec. 2017
- Co-authored a peer-reviewed conference paper at a top speech-processing conference
- Collected a novel emotion-in-speech dataset by developing a script and hiring and directing 10+ actors in readings

Applied Research Laboratories, UT Austin – *Engineering Scientist Associate* — Nov. 2014 – Jun. 2017
- Initiated the development of a new software package for external stakeholders which improved geolocation performance in dynamic atmospheric conditions; used agile strategies to approach project development
- Created mathematical models to analyze airplane and boat traffic from vehicle-emitted radio transmissions; techniques laid groundwork for new funding and research directions in the organization
- Analyzed scientific dataset by creating statistical software tools which resulted in a peer-reviewed conference presentation; visualizations were used in presentations delivered to funders and stakeholders

Biomedical Informatics Lab, UT Austin – *Research Assistant* — May 2016 – Aug. 2016
- Published two peer-reviewed papers on lesion detection in mammography images with a computational model

Advanced Mirco Devices, Inc. – *Co-op Engineer* — May 2014 – Aug. 2014
- Deployed tests to validate the functionality of processor memory on an in-development microprocessor
- Informed quality assurance team and management on a weekly basis by presenting test results in group meetings

United States Marine Corps Reserves – *Platoon Sergeant* — Jan. 2010 – Jan. 2018
- Meritoriously promoted to Sergeant and nominated for the Platoon Sergeant position by superiors
- Successfully conducted 10+ convoy operations to forward-operating bases/outposts during a six-month tour in Afghanistan; managed and maintained communication systems for entire convoy while commanding a vehicle
- Led and advised 20+ junior marines (15+ junior enlisted, 5+ non-commissioned officers)
- Implemented a personnel feedback system to improve platoon performance; feedback system resulted in the successful promotion of two high-performers from meritorious promotions

SELECTED PUBLICATIONS

[1] J. Reinhold, et al. "Validating uncertainty in medical image translation." IEEE ISBI 2020. *To appear*.

[2] J. Reinhold, et al. "Finding novelty with uncertainty." SPIE Medical Imaging 2020. *To appear*.

[3] J. Reinhold, et al. "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.

ADDITIONAL INFORMATION

Programming Skills: Proficient with Python; Experience with R, Julia, C/C++

Honors & Awards: Ferdinand Hamburger Jr. Fellowship, Raytheon-SVA Scholarship, Frederic and Julia Weigl Scholarship, Jean Perkins Combat Veteran Scholarship, Jerry A. and Martha Lel Hawkins Endowed Scholarship, nominated for Texas Exes Presidential Leadership award, invited member of IEEE Eta Kappa Nu (honor society)

Other Activities: Writer for "Towards Data Science" (two articles with over 12K reads, 28.7K views); project developer for Manning Publications (created educational deep learning course for medical imaging applications)

Interests: Writing, open-source software, drawing, mandolin, reading non-fiction books and *The Economist*

Work Eligibility: US Citizen; **Languages**: English Native, Basic French