

# JACOB REINHOLD

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## EDUCATION

Johns Hopkins University	M.S.E., Electrical and Computer Engineering GPA: 3.74/4.00	December 2019
The University of Texas at Austin	B.S., Electrical Engineering GPA: 3.75/4.00	December 2016

## EXPERIENCE

<b>Image Analysis and Communication Lab, JHU</b> – <i>Research Assistant</i>	Jan. 2018 – Present
<ul style="list-style-type: none"><li>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</li><li>Published three peer-reviewed conference papers and co-authored one journal article on machine learning</li><li>Developed novel deep learning and statistical techniques to detect disease in magnetic resonance brain images</li><li>Created and maintained open-source software for medical image processing (100+ stars, 30+ forks on Github)</li><li>Accepted into the competitive Ph.D. program and qualified by completing several oral and written technical tests</li></ul>	
<b>Neural Systems Analysis Lab, JHU</b> – <i>Research Assistant</i>	Aug. 2017 – Dec. 2017
<ul style="list-style-type: none"><li>Co-authored a peer-reviewed conference paper at a top speech-processing conference</li><li>Collected a novel emotion-in-speech dataset by developing a script and hiring and directing 10+ actors in readings</li><li>Conducted exploratory research into morphing the emotional content of speech recordings via statistical methods</li></ul>	
<b>Applied Research Laboratories, UT Austin</b> – <i>Engineering Scientist Associate</i>	Nov. 2014 – Jun. 2017
<ul style="list-style-type: none"><li>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</li><li>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</li><li>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</li></ul>	
<b>Biomedical Informatics Lab, UT Austin</b> – <i>Research Assistant</i>	May 2016 – Aug. 2016
<ul style="list-style-type: none"><li>Published two peer-reviewed papers on lesion detection in mammography images with a computational model</li></ul>	
<b>Advanced Mirco Devices, Inc.</b> – <i>Co-op Engineer</i>	May 2014 – Aug. 2014
<ul style="list-style-type: none"><li>Deployed tests to validate the functionality of processor memory on an in-development microprocessor</li><li>Informed quality assurance team and management on a weekly basis by presenting test results in group meetings</li></ul>	
<b>United States Marine Corps Reserves</b> – <i>Platoon Sergeant</i>	Jan. 2010 – Jan. 2018
<ul style="list-style-type: none"><li>Meritoriously promoted to Sergeant and nominated for the Platoon Sergeant position by superiors</li><li>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</li><li>Led and advised 20+ junior marines (15+ junior enlisted, 5+ non-commissioned officers)</li><li>Implemented a personnel feedback system to improve platoon performance on a leadership and individual level; feedback system resulted in the successful promotion of two high-performers from meritorious promotions</li></ul>	

## 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