

Josh Fromm

CONTACT INFORMATION	2510B NE 65th St Seattle, WA 98115	<i>Mobile:</i> +1-626-676-2684 <i>E-mail:</i> jwfromm@uw.edu <i>Website:</i> jwfromm.com
EDUCATION	University of Washington , Seattle, WA Pursuing a Ph.D in Electrical Engineering as part of the UbiComp Lab. California Institute of Technology , Pasadena, CA Bachelor of Science with Honors in Electrical Engineering with a Minor in Computer Science.	2014 - 2019. June 2014
EXPERIENCE	Graduate Student UbiComp Lab <i>Researching novel applications and architectures for deep neural networks, with an emphasis on high performance computer vision systems.</i> Google Nest Nest Brain Team <i>Developed novel generative adversarial network training techniques to enable realistic colorization of IR images captured by Nest Cams.</i> Microsoft Research Machine Learning on the Edge Group <i>Explored neural network binarization as a method for enabling deep convolutional neural network inference on Raspberry Pi class devices. Developed novel binarization algorithms to allow fine-grained tuning of speed and accuracy tradeoff.</i> Microsoft Research Cambridge Sensors and Devices Team <i>Developed RF power harvesting techniques and hardware as part of the NEXT initiative to create novel interaction technology.</i> Nvidia Corporation GPU Verification Division <i>Verified that streaming multiprocessor operation in RTL matched simulated outputs using a C++ model.</i> NASA Jet Propulsion Laboratory Chris Assad Lab, Robotics Division <i>Designed and developed EMG electrode system that allows control of a robotic arm through muscle activity.</i>	2014 to present Research Assistant 2018 Research Intern 2016 and 2017 Research Intern 2015 Research Intern 2013 and 2014 ASIC Engineer SURF Fellow 2012
CONFERENCE PUBLICATIONS	Fromm J, Patel S, Phillipose M. Heterogeneous Bitwidth Binarization in Convolutional Neural Networks. In: NIPS, 2018. Moreau T, Chen T, Fromm J, et al. Software-Micromanaged Hardware For Extensible Deep Learning Acceleration. In: ASPLOS 2018. Saba E, Fromm J, Jiayao C, Patel S. TB or not TB: Cough Detection and Tuberculosis Classification for Pulmonary Health Estimation. In: IMWUT, 2018. Hwan Ko J, Fromm J, Phillipose M, Tashev I, Zarar S. Liming Numerical Precision of Neural Networks to Achieve Real-Time Voice Activity Detection. In: ICASSP, 2018. Li H, Brockmeyer E, Carter E, Fromm J, Hudson S, Patel S, Sample A. PaperID: A Technique for Drawing Functional Battery-Free Wireless Interfaces on Paper. In: CHI, 2016. Goel M, Saba E, Stiber M, Whitmire E, Fromm J, Larson E, Borriello G, Patel S. SpiroCall: Measuring Lung Function over a Phone Call. In: CHI, 2016. Wolf M, Assad C, Vernacchia M, Fromm J, Jethani H. Gesture-Based Robot Control with Variable Autonomy from the JPL BioSleeve. In: IEEE Conference on Robotics and Automation (ICRA), 2013.	