Evan M. Yu

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Education

Cornell University - PhD — Sep 2015 – Present
Biomedical Engineering — *Ithaca, NY*
Advisor: Mert R. Sabuncu
Committee: Kilian Q. Weinberger and Amy Kuceyeski

Cornell University - MS — Ithaca, NY
Biomedical Engineering — *2019*

Stony Brook University - BE — Stony Brook, NY
Biomedical Engineering — *Aug. 2011 – May 2015*
Summa Cum Laude - Highest Honor

Publications

Evan M. Yu, Juan Eugenio Iglesias, Adrian V. Dalca, Mert R. Sabuncu. An Auto-Encoder Strategy for Adaptive Image Segmentation. Medical Imaging with Deep Learning (2020). **Spotlight**.

Evan M. Yu, Mert R. Sabuncu. A Convolutional Autoencoder Approach to Learn Volumetric Shape Representations for Brain Structures. International Symposium on Biomedical Imaging (2018). **Oral**.

Evan M. Yu, Adrian V. Dalca, Mert R. Sabuncu. Learning Conditional Deformable Shape Templates for Brain Anatomy. MICCAI: Machine Learning in Medical Imaging (2020).

Adrian V. Dalca, Evan M. Yu, Polina Golland, Bruce Fischl, Mert R. Sabuncu, Juan Eugenio Iglesias. Unsupervised Deep Learning for Bayesian Brain MRI Segmentation. Medical Image Computing and Computer Assisted Intervention (2019).

Professional Experience

Graduate Research Assistant — Aug 2015 – Present
Cornell University — *Ithaca, NY*
Research Interest: medical image analysis, deep learning, machine learning, computer vision
Ongoing work: domain adaptation, weakly supervised segmentation, out-of-distribution detection

Intern — May 2016 – Aug 2016
New York-Presbyterian & Weill Cornell Medicine — *New York, NY*
- Employ a machine learning algorithms to help predict prognosis of traumatic brain injury
- Interaction with physicians to learn about of technological challenges in clinical practice
- OR observership

Teaching Assistant
Cornell University
- ECE 5970: Machine Learning with Biomed Data (Fall 2018 & 2020)
- BME 5930: BME Master of Engineering projects (Spring 2014)

Stony Brook University
- BME 212: Biomedical Engineering Research Fundamentals (Spring 2014)

Undergrad Research — Sep 2013 – May 2015
Stony Brook University — *Stony Brook, NY*
- Deployed kernel methods to identify patients with major depressive disorder
- Supervised interns' manual delineation and correction of brain MRI

Summer Undergraduate Research
Buffalo University (2014)
- Developed LabVIEW pipeline to conduct and evaluate self-administration experiments for rodents

- Designed cost-effective rat chambers, saving thousands of dollars, for self-administration experiments

Stony Brook University (2013)

- Investigated the role of low intensity vibration on bone preservation
- Operated a microCT to observe the effect of cancer on rat bones

Honors and Awards

Neufeld S. Arthur & Dorothy R Schol Fellowship USD 8,593.00
Presidential Scholarship USD 10,000.00
SUNY Brain Summer Scholar USD 3,500.00
Dean's List, Stony Brook University (2011-2015)

Community Service

Journal Reviewer Present

- Active reviewer for Neuroimage and The Machine Learning for Biomedical Imaging (MELBA)

MICCAI UNSURE Workshop Oct 2020

- Reviewing Committee

Graduate Students Mentoring Undergraduates Sep 2016 - April 2018

- Supported the scholarship and professional development of undergraduate scholars

SBU Campus Community Emergency Response Team Jan 2011 - May 2013

- Assisted in first-aid stations, crowd and traffic control during events on campus

Technical Skills

Programming Languages: Python, Matlab, LabVIEW, C.
Machine Learning Tools: PyTorch, Keras, Scikit.
Developer Tools: Git, Vim, LaTeX.
Language: fluent in English and Spanish, conversational Cantonese.

Coursework

Bayesian Machine Learning · Computer Vision · Statistical Distances for Machine Learning · Probability and Statistics Machine Learning with Biomedical Applications · Signals and Systems · Linear Algebra · Ordinary Differential Equations · Quantitative Human Physiology