Samuel W. Remedios

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Education

Johns Hopkins University / Ph.D. Computer Science
JUNE 2020 - PRESENT, BALTIMORE, MD,, USA

Middle Tennessee State University / B.S. Computer Science / **GPA 4.0**
Summa cum laude
JAN 2016 - DEC 2019, MURFREESBORO, TN, USA

University of British Columbia
AUG 2009 - JAN 2010, VANCOUVER, BC, CANADA

Experience

Henry M. Jackson Foundation / Research Volunteer
SEPT 2017 - PRESENT, BETHESDA, MD, USA
Applied deep learning and statistical analysis to medical imaging

Vanderbilt University / Observer
SEPT 2017 - PRESENT, NASHVILLE, TN, USA
Applied deep learning and statistical analysis to medical imaging

National Institutes of Health / Machine Learning Research Intern
JUNE 2017 - AUG 2017, BETHESDA, MD, USA
Researched applications of deep learning for classifications of magnetic resonance brain images at the NIH Clinical Center Radiology Department and CNRM Imaging Core

School of Rock / Vocal and Guitar Instructor
MAY 2015 - SEPT 2016, FRANKLIN, TN, USA
Taught vocals and guitar to child, adolescent, and adult students

Publications

Remedios, S.W., Wu, Z., Bermudez, C., Kerley, C.I., Roy, S., Patel, M.B., Butman, J.A., Landman, B.A., Pham, D.L. Extracting 2D weak labels from volume labels using multiple instance learning in CT hemorrhage detection. SPIE IP:MI 2020. Houston, TX.

Bermudez, C., Huo, Y., Blaber, J., **Remedios, S.W.**, Reynolds, J.E., Lebel, C., McHugo, M., Heckers, S., Landman, B.A. Generalizing Deep Whole Brain Segmentation for Pediatric and Post-Constrast MRI with Augmented Transfer Learning. SPIE IP:MI 2020. Houston, TX.

Remedios, Samuel W., Snehashis Roy, Camilo Bermudez, Mayur B. Patel, John A. Butman, Bennett A. Landman, and Dzung L. Pham. "Distributed Deep Learning Across Multi-site Datasets for Generalized CT Hemorrhage Segmentation." Medical physics (2019).

Samuel Remedios, Snehashis Roy, Justin Blaber, Camilo Bermudez, Vishwesh Nath, Mayur B. Patel, John A. Butman, Bennett A. Landman, and Dzung L. Pham. "Distributed deep learning for robust multi-site segmentation of CT imaging after traumatic brain injury", SPIE Medical Imaging, San Diego, CA, 2019.

Vishwesh Nath, **Samuel Remedios**, Prasanna Parvathaneni, Colin B. Hansen, Roza G. Bayrak, Camilo Bermudez, Justin A. Blaber, Karthik Ramadass, Kurt G. Schilling, Vaibhav A. Janve, Yurui Gao, Yuankai Huo, Ilwoo Lyu, Owen Williams, Susan Resnick, Lori Beason-Held, Baxter P. Rogers, Iwona Stepniewska, Adam W. Anderson, Bennett A. Landman, "Harmonizing 1.5T/3T Diffusion Weighted MRI through Development of Deep Learning Stabilized Microarchitecture Estimaors", SPIE Medical Imaging, San Diego, CA, 2019

K. G. Schilling*, V. Nath*, **S. Remedios**, R. G. Bayrak, Y. Gao, J. A. Blaber, Y. Huo, B. A. Landman, A. W. Anderson "Learning 3D White Matter Microstructure from 2D Histology" ISBI 2019, Venice, Italy.

Vishwesh Nath, Kurt G. Schilling, Prasanna Parvathaneni, Colin B. Hansen, Allison E. Hainline, Camilo Bermudez, **Samuel Remedios**, Justin A. Blaber, Vaibhav Janve, Yurui Gao, Iwona Stepniewska, Baxter P. Rogers, Allen T. Newton, Taylor Davis, Jeff Luci, Adam W. Anderson, Bennett A. Landman, "Inter-Scanner Harmonization of High Angular Resolution DW-MRI using Null Space Deep Learning", Granada, Spain, CD-MRI 2018.

Samuel Remedios, Dzung L. Pham, John A. Butman, Snehashis Roy, "Classifying magnetic resonance image modalities with convolutional neural networks", Proc. SPIE 10575, Medical Imaging 2018: Computer-Aided Diagnosis, 105752I (27 February 2018); doi: 10.1117/12.2293943

Oral Presentations

Obtaining a trained 2D deep learning model with 3D weak volume labels using multiple instance learning for CT hemorrhage detection
NCA TBI Research Symposium, Bethesda, MD 2020

Extracting 2D weak labels from volume labels using multiple instance learning in CT hemorrhage detection
SPIE Medical Imaging, Houston, TX 2020

Distributed deep learning for robust multi-site segmentation of CT imaging after traumatic brain injury
SPIE Medical Imaging, San Diego, CA 2019

Deep Learning for Classification of Magnetic Resonance Brain Images
NIH CC SIP RADIS, Bethesda, MD 2017

Service

Journal of Medical Imaging
Reviewer

Journal of Remote Sensing
Reviewer

Journal of Electronic Imaging
Reviewer

Awards

WINNER Outstanding Senior Award 2019 - MTSU, Murfreesboro, TN, USA.
Outstanding performance in computer science

WINNER VandyHacks 2018 - Nashville, TN, USA.
Best use of MicroStrategy API: Live data visualization for mobile insights; Prize: Nintendo Switch

HM Barry Goldwater Scholarship 2018

WINNER Outstanding Junior Award 2018 - MTSU, Murfreesboro, TN, USA.
Outstanding performance in computer science

WINNER Best Presentation of Research in Imaging - NIH, Bethesda, MD, USA.
1st place : 2017 SIP RADIS Oral Presentation Competition

WINNER Best Poster Award - NIH, Bethesda, MD, USA.
1st place : 2017 SIP Poster Session: Machine learning applications for brain MRI

WINNER Outstanding Sohpomore Award 2017 - MTSU, Murfreesboro, TN, USA.
Outstanding performance in computer science

WINNER HackMT 2017 - Murfreesboro, TN, USA.
2nd place : recommending parking locations via probabilistic models

WINNER Purdue Boilermake 2017 - West Lafayette, IN, USA
Best use of MongoDB : Markov chains to create Hackathon Ideas; Prize: Bose QuietComfort 35

WINNER HoyaHacks 2016 - Washington D.C, USA.
Best Education Hack : Genetic algorithms to generate music

WINNER MTSU ACM Code Contest 2016 - Murfreesboro, TN, USA.
1st place winning team