Clinton J. Wang

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Education

Ph.D. Candidate, Massachusetts Institute of Technology 2020–present

Electrical Engineering and Computer Science, GPA: 5.0/5.0
Advisor: Polina Golland

S.M. Massachusetts Institute of Technology 2018–2020

Electrical Engineering and Computer Science, GPA: 5.0/5.0
Thesis: High fidelity medical image-to-image translation
Advisor: Polina Golland
Coursework: Computer Vision, Inference and Information Theory, Natural Language Processing, Digital Image Processing, Analysis on Manifolds, Fourier Analysis, Probability

B.Sc. Yale University, *Magna Cum Laude* 2011–2015

Biomedical Engineering, GPA: 3.9/4.0

Research Experience

MIT Computer Science and Artificial Intelligence Laboratory 2018–present
Advised by Polina Golland
Robust and interpretable GANs for longitudinal scan prediction and image-to-image translation on real-world clinical brain MRIs. Representations of spatial relationships between parts, objects, and background in 3D images and scenes for segmentation tasks.

Yale Radiology Research Lab 2017–2018
Advised by Jim Duncan
Interpretable deep learning for hepatic lesion classification on MRI; robust tumor segmentation; statistical analysis of longitudinal image-derived features; PACS integration.

Analytics & Technology Consultant, *PwC* 2015–2017
Semi-supervised keyword extraction and topic classification on social media feeds with LSTMs; logic and code for cleansing, matching and merging customer data for a major airline.

Yale School of Engineering & Applied Science 2014–2016
Advised by Stuart Campbell
Multi-scale computational model of heart muscle contraction using interacting Markov models fitted with particle swarm optimization.

Yale School of Engineering & Applied Science 2013
Advised by Hal Blumenfeld
Time series and Fourier analysis of EEGs to characterize propagation of partial seizures.

Journal Articles and Conference Proceedings

Deep learning–assisted differentiation of pathologically proven atypical and typical hepatocellular carcinoma (HCC) versus non-HCC on contrast-enhanced MRI of the liver
Paula M. Oestmann, **Clinton J. Wang**, Lynn J. Savic, Charlie A. Hamm, Sophie Stark, Isabel Schobert, Bernhard Gebauer, Todd Schlachter, MingDe Lin, Jeffrey C. Weinreb, Ramesh Batra, et al.
European Radiology (2021). [Paper]

Spatial-Intensity Transform GANs for High Fidelity Medical Image-to-Image Translation
Clinton J. Wang, Natalia S. Rost, and Polina Golland
MICCAI: Medical Image Computing and Computer Assisted Intervention (2020), [Acc. Rate: 30%].
[Paper] [Oral]

Automated feature quantification of Lipiodol as imaging biomarker to predict therapeutic efficacy of conventional transarterial chemoembolization of liver cancer
Sophie Stark, **Clinton Wang**, Lynn Jeanette Savic, Brian Letzen, Isabel Schobert, Milena Miszczuk, Nikitha Murali, Paula Oestmann, Bernhard Gebauer, MingDe Lin, James Duncan, et al.
Nature Scientific Reports (2020). [Paper]

A probabilistic approach for interpretable deep learning in liver cancer diagnosis
Clinton J. Wang, Charlie A. Hamm, Brian S. Letzen, and James S. Duncan
SPIE Medical Imaging (2019). [Paper] [Oral]

Deep learning for liver tumor diagnosis part II: interpretable deep learning to characterize tumor features
Clinton J. Wang*, Charlie A. Hamm*, Lynn J. Savic, Marc Ferrante, Isabel Schobert, Todd Schlachter, MingDe Lin, Jeffrey C. Weinreb, James S. Duncan, Julius Chapiro, and Brian Letzen
European Radiology (2019). [Paper]

Deep learning for liver tumor diagnosis part I: development of a convolutional neural network classifier for multi-phasic MRI
Charlie A. Hamm*, **Clinton J. Wang***, Lynn J. Savic, Marc Ferrante, Isabel Schobert, Todd Schlachter, MingDe Lin, James S. Duncan, Jeffrey C. Weinreb, Julius Chapiro, and Brian Letzen
European Radiology (2019). [Paper]

The Role of Artificial Intelligence in Interventional Oncology: A Primer
Brian Letzen, **Clinton J. Wang**, and Julius Chapiro
Journal of Vascular and Interventional Radiology (2019). [Paper]

Slowing of contractile kinetics by myosin-binding protein C can be explained by its cooperative binding to the thin filament
Clinton Wang, Jonas Schwan, and Stuart G Campbell
Journal of Molecular and Cellular Cardiology (2016). [Paper]

Peer Review

International Conference on Medical Image Computing and Computer Assisted Intervention 2021

Teaching and Mentorship

Teaching Assistant, MIT 2021

6.819/6.869: Advances in Computer Vision. Prof. Bill Freeman and Phillip Isola

Undergraduate Mentor (MIT Undergraduate Research Opportunities Program) 2020

Awards

Takeda Fellowship 2021-2022

Siebel Foundation Scholar 2020

Department of Biomedical Engineering Prize (Yale) 2015

Tau Beta Pi Engineering Honor Society (Yale) 2015

International Biology Olympiad (silver medalist) 2009

Leadership Roles

Graduate Student Advisory Group for Engineering (GradSAGE), MIT 2019–2021

Advised the Dean of the School of Engineering on policies and initiatives for graduate students. Developed and organized leadership workshops, a leadership minor, and a leadership certificate program.

Controller, Sidney-Pacific Graduate Residence 2019–2021

Managed internal budgeting, reimbursements, accounting, and financial reporting for MIT's largest graduate dormitory (houses 749 students).

Associate Managing Editor, *Yale Daily News* 2013–2014

Boosted readership and improved user experience by overhauling the website design.

Production & Design Editor, *Yale Daily News* 2012–2013

Oversaw design of the newspaper; recruited, trained and managed 10 designers.

Interests

Music composition (classical): won Honorable Mention (2012) and was finalist (2013) at ASCAP Morton Gould Young Composer Awards

Graphic design: won 2nd place in ACA Infographic Contest at Yale Institution for Social and Policy Studies (2013)

Languages: Mandarin (advanced), German (basic), French (basic)