Wenjun Wu

Ph.D Candidate

wenjunw@cs.washington.edu
meredith-wenjunwu.github.io

Research Interest

I am a fourth-year Ph.D. student in the GRAIL lab at the University of Washington, Seattle, advised by Prof. Linda Shapiro. My research interests lie at the intersection of **biomedical image analysis, machine learning, and computer vision**, especially in **designing interpretable tools and architectures** that have potential in real-world clinical applications. I'm currently working on an attention-based multi-task architecture for whole-slide skin biopsy diagnosis and segmentation.

Education

2017 - present — **University of Washington, Seattle, WA**
Ph.D., Biomedical Informatics
Advisor: Linda Shapiro
Overall GPA: 3.72/4.00

2013 - 2014 — **Georgia Institute of Technology**
B.S. in Biomedical Engineering
Advisor: May Wang, Ajit Yoganathan
Overall GPA: 3.83/4.00

Publications

2020
MLCD: A Unified Software Package for Cancer Diagnosis
Wu, W., *Li, B., Ezgi, M., Mehta, S., Bartlett J., Weaver, D., Elmore, J., Shapiro,L.*
JCO Clinical Cancer Informatics 4, 290-298, 2020 [website]

2020
Comparison of Fontan Surgical Options for Patients with Apicocaval Juxtaposition
Wei, Z., Johnson C., Trusty P., Stephens M., **Wu W.**, *Sharon R., Srimurugan B., Kottayil B., Sunil G., Fogel M., Yoganathan A., Kappanayil M*
Pediatric Cardiology, 1-10, 2020

2018
The advantages of viscous dissipation rate over simplified power loss as a Fontan hemodynamic metric
Wei Z., Tree M., Trusty P., **Wu W.**, *Singh-Gryzbon S., Yoganathan A.*
2018 Annals of biomedical engineering 46 (3), 404-416

2017
11C-PIB PET image analysis for Alzheimer's diagnosis using weighted voting ensembles
Wu W., Venugopalan J., Wang M.
IEEE Engineering in Medicine and Biology Society (EMBC 2017)

Research Experience

2018 Summer — **Machine Learning Intern**
Siemens Corporate Research
Worked with product design, modeling, and simulation (PSM) team on data-driven tools for computer-aided manufacturing and design using machine learning. Designed information extraction and data augmentation methods for the problem of rough-stage1 3-axis CNC machining of 3D objects.

2017 - present	**Research Assistant - Prof. Shapiro's Lab**	

Paul G. Allen School of Computer Science & Engineering
Create deep learning systems for skin biopsy image analysis from limited data and labels. Design pipeline and architecture, conduct data analysis and communicate with pathologists to troubleshoot labeling and data collection in an NIH R01 project.

2014 - 2017   **Research Assistant - The Bio-MIBLab**
Georgia Institute of Technology, Advisor: May D. Wang
Worked on analysis and diagnosis of Alzheimer's disease from PET images. Papers accepted to *EMBC 2017*.

2014 - 2017   **Research Assistant - The CFM Lab**
Georgia Institute of Technology, Advisor: Ajit Yoganathan
Performed computational fluid dynamics simulations for fontan patients; Papers accepted to *Pediatric Cardiology (2020)* and *2018 Annals of biomedical engineering*

Teaching Experience

2017 - 2019   **CSE 373 Data Structure and Algorithm**, *University of Washington*
Instructor: Evan MaCarty, Michael Lee and Kasey Champion
Led weekly section, write section-handouts and exam study guides.
[Course Website]

Skills

Programming	Python, C/C++, Java, shell scripts, MATLAB, R, Swift
Deep Learning	pytorch, tensorflow
Technical	LaTeX, AutoCAD, Solidworks, LABVIEW, ANSYS Fluent
Relevant Coursework	Computer Vision, Applied Biostatistics, Knowledge Representation Bioinformatics, Statistical Learning, Deep learning, Computer Systems Algorithm Analysis, Image Processing, Artificial Intelligence, Data Structure
Languages	English, Chinese, Spanish

Awards

2017	**President Research Award**, *Georgia Institute of Technology*
2016, 2017	**Faculty Honors**, *Georgia Institute of Technology*
2014, 2015	**Dean's list**, *Georgia Institute of Technology*