Beibin Li

Curriculum Vitae

(Updated Oct. 2020)
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Education

2017 - 2022 **Ph.D. student**, *Computer Science & Engineering*, University of Washington.
Advisors: Linda Shapiro, and Frederick Shic.

2015 **Bachelor of Science**, *Double Major Computer Science and Mathematics*, University of Michigan, Ann Arbor.

Experience

2020 **Research Intern**, *Microsoft Research.*
Advisor: Yao Lu, Srikanth Kandula
Solve dataset shift problem by active learning, interactive learning, and generative methods. Apply machine learning and deep learning to improve database systems, including cardinality estimation, query optimization, and index tuning.

2015–2017 **Research Associate**, *Seattle Children's; Yale University.*
Advisor: Frederick Shic
Create deep learning systems for image and video analysis. Design eye-tracking experiments, develop fixation identification algorithm, and conduct data analysis. Communicate with collaborating sites to troubleshoot eye-tracking experiments in a NIH R01 multi-site project.

Awards

2017-2018 Faithful Steward Endowed Fellowship, University of Washington

2015-2017 Translational Technologies Fellowship, Yale University

2013–2015 University Honors, University of Michigan

Publications

2021 Nuechterlein, N.; **Li, B.**; Feroze, A.; Holland, E; Shapiro, L; Haynor, D.; Fink, J. & Cimino, P. Applying a Radiogenomic Approach to Predict Clinically-relevant Genome-wide Molecular Signatures in Glioblastoma. *Accepted.* Neuro-Oncology Advances.

2021 Shic, F.; Naples, A.; Barney, E.; Chang, S.; **Li, B.**; McAllister, T.; Kim, M.; Hasselmo, S.; Atyabi, A.; Wang, Q.; Hellemann, G.; Levin, A.; Seow, H.; Bernier, R.; Chawarska, K.; Dawson, G.; Dziura, J.; Faja, S.; Jeste, S.; Johnson, S.; Murias, M.; Nelson, C.; Sabatos-DeVito, M.; Senturk, D.; Sugar, C.; Webb, S. & McPartland, J. The Autism Biomarkers Consortium for Clinical Trials: Evaluation of a Battery of Candidate Eye Tracking Biomarkers for Use in Autism Clinical Trials. *In Review.*

2020 **Li, B.**; Mercan, E.; Mehta, S.; Knezevich, S.; Arnold, C.; Weaver, D.; Elmore, J. & Shapiro, L. Classifying Breast Histopathology Images with a Ductal Instance-Oriented Pipeline. In *2020 25th International Conference on Pattern Recognition. IEEE.*

2020 Nuechterlein, N.; **Li, B.**; Seyfioglu, M.; Mehta, S.; Cimino, P. & Shapiro, L. Leveraging Unlabeled Data for Glioma Molecular Subtype and Survival Prediction. In *2020 25th International Conference on Pattern Recognition. IEEE.*

2020 **Li, B.**; Barney, E.; Hudac, C.; Nuechterlein, N.; Ventola, P.; Shapiro, L.; Shic, F. Selection of Eye-Tracking Stimuli for Prediction by Sparsely Grouped Input Variables for Neural Networks: towards Biomarker Refinement for Autism. In *Proceedings of the Ninth Biennial ACM Symposium on Eye Tracking Research and Applications.* ACM. (ACM ETRA 2020).

2020 Wu, W., **Li, B.**, Ezgi, M., Mehta, S., Bartlett, J., Weaver, D., Elmore, J., & Shapiro, L. MLCD: A Unified Software Package for Cancer Diagnosis. In *Journal of Clinical Oncology.* 2020

2019 **Li, B.**, Nuechterlein, N., Barney, E., Hudac, C., Ventola, P., Shapiro, L., & Shic, F. Sparsely Grouped Input Variables for Neural Networks. 2019

2019 **Li, B.**, Mehta, S., Aneja, D., Foster, C., Ventola, P., Shic, F., & Shapiro, L. A Facial Affect Analysis System for Autism Spectrum Disorder. In *Proceedings of the IEEE International Conference on Image Processing (ICIP).* 2019

2018 **Li, B.**, Atyabi, A., Kim, M., Barney, E., Ahn, A., Luo, Y., Aubertine, M., Corrigan, S., John, T., Wang, Q., Mademtzi, M., Best, M., & Shic, F. Social Influences on Executive Functioning in Autism: Design of a Mobile Gaming Platform. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems.* 2018

2017 Atyabi, A., **Li, B.**, Ahn, A., Kim, M., Barney, E., & Shic, F. An Exploratory Analysis Targeting Diagnostic Classification of AAC App Usage Patterns. In *IEEE International Joint Conference on Neural Networks (IJCNN 2017)*

2016 Wang, Q, , Barney, E., Wall, C., Dinicola, L., Foster, C., Ahn, Y., **Li, B.**, & Shic, F. Hybrid Calibration for Eye Tracking: Smooth Pursuit Trajectory with Anchor Points. In *Journal of Vision 16(12):1355. September 2016*

2016 Boccanfuso, L., Wang, Q., Leite, I., **Li, B.**, Torres, C., Chen, L., Salomons, N., Foster, C., Barney, E., Ahn, Y., Scassellati, B., & Shic, F.. A Thermal Emotion Classifier for Improved Human-Robot Interaction. In *IEEE International Symposium on Robot and Human Interactive Communication 2016 (RO-MAN 2016).*

2016 **Li, B.**, Boccanfuso, L., Wang, Q., & Shic, F.. Human Robot Activity Classification based on Accelerometer and Gyroscope. In *IEEE International Symposium on Robot and Human Interactive Communication 2016 (RO-MAN 2016).*

2016 Wang, Q., Boccanfuso, L., **Li, B.**, Ahn, A. Y. J., Foster, C. E., Orr, M. P., ... & Shic, F. (2016, March). Thermographic eye tracking. In *Proceedings of the Ninth Biennial ACM Symposium on Eye Tracking Research & Applications* (pp. 307-310). ACM.

2016 **Li, B.**, Wang, Q., Barney, E., Hart, L., Wall, C., Chawarska, K., ... & Shic, F. (2016, March). Modified DBSCAN algorithm on oculomotor fixation identification. In *Proceedings of the Ninth Biennial ACM Symposium on Eye Tracking Research & Applications* (pp. 337-338). ACM.

2016 **Li, B.**, Wang, Q., Boccanfuso, L., & Shic, F. (2016, March). Optimality of the distance dispersion fixation identification algorithm. In *Proceedings of the Ninth Biennial ACM Symposium on Eye Tracking Research & Applications* (pp. 339-340). ACM.

Academic Service

2020 **Committee Member**. International Conference on Mobile, Hybrid, and On-line Learning

2019, 2020 **Reviewer**. ACM SIGCHI Conference on Human Factors in Computing Systems

2018, 2020 **Reviewer**. ACM Symposium on Eye Tracking Research & Applications

Teaching

2020 CSE 599B, TA, AI and the Brain. University of Washington, Seattle

2020 CSE 455, TA, Computer Vision. University of Washington, Seattle

2019 CSE 473, TA, Intro to Artificial Intelligence. University of Washington, Seattle

2018 CSE 546, TA, Machine Learning. University of Washington, Seattle

2015 EECS 376, TA, Theory of Computation. University of Michigan, Ann Arbor