SHI-ANG QI

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EDUCATION

University of Alberta, Edmonton *Sept. 2020 - Present*
Ph.D. in Computer Science GPA: 3.93/4.0
University of Alberta, Edmonton *Sept. 2016 - May 2020*
M.Sc. in Electrical and Computer Engineering GPA: 3.55/4.0
Huazhong University of Science and Technology *Sept. 2012 - June 2016*
B.Eng. in Biomedical Engineering GPA: 3.4/4.0

PUBLICATIONS

- **Shi-ang Qi**, Yakun Yu, Russell Greiner, "Conformalized Survival Distributions: A Generic Post-Process to Increase Calibration" Accepted to the 41th International Conference on Machine Learning.
- Yousef Nademi, Sunil V Kalmady, Weijie Sun, **Shi-ang Qi**, Abram Hindle, Padma Kaul, Russell Greiner. "Supervised Electrocardiogram (ECG) Features Outperform Knowledge-based And Unsupervised Features In Individualized Survival Prediction." Proceedings of the 3rd Machine Learning for Health Symposium, PMLR 225:368-384, 2023.
- **Shi-ang Qi**, Weijie Sun, Russell Greiner. "SurvivalEVAL: A Comprehensive Open-Source Python Package for Evaluating Individual Survival Distributions." In Proceedings of the AAAI Symposium Series, vol. 2, no. 1, pp. 453-457. 2023.
- Weijie Sun, Sunil Vasu Kalmady, **Shi-ang Qi**, Nariman Sepehrvand, Abram Hindle, Russell Greiner, Padma Kaul. "Predicting Individual Survival Distributions Using ECG: A Deep Learning Approach Utilizing Features Extracted by a Learned Diagnostic Model." In Proceedings of the AAAI Symposium Series, vol. 2, no. 1, pp. 475-481. 2023.
- Yakun Yu, **Shi-ang Qi**, Jiuding Yang, Liyao Jiang, Di Niu. "iHAS: Instance-wise Hierarchical Architecture Search for Deep Learning Recommendation Models." In Proceedings of the 32nd ACM International Conference on Information and Knowledge Management (CIKM '23).
- **Shi-ang Qi**, Neeraj Kumar, Ruchika Verma, Jian-Yi Xu, Grace Shen-Tu, Russell Greiner. "Using Bayesian Neural Networks to Select Features and Compute Credible Intervals for Personalized Survival Prediction." IEEE Transactions on Biomedical Engineering, vol. 70, no. 12 (2023): 3389-3400.
- Yakun Yu, Mingjun Zhao, **Shi-ang Qi**, Feiran Sun, Baoxun Wang, Weidong Guo, Xiaoli Wang, Lei Yang, Di Niu. "ConKI: Contrastive Knowledge Injection for Multimodal Sentiment Analysis." In Findings of the Association for Computational Linguistics: ACL 2023, pp. 13610-13624. 2023.
- **Shi-ang Qi**, Neeraj Kumar, Mahtab Farrokh, Weijie Sun, Li-Hao Kuan, Rajesh Ranganath, Ricardo Henao, Russell Greiner. "An Effective Meaningful Way to Evaluate Survival Models." Proceedings of the 40th International Conference on Machine Learning, PMLR 202:28244-28276, 2023.
- Zehra Shah, **Shi-ang Qi**, Fei Wang, Mahtab Farrokh, Mashrura Tasnim, Eleni Stroulia, Russell Greiner, Manos Plitsis, Athanasios Katsamanis. "Exploring Language-Agnostic Speech Representations using Domain Knowledge for Detecting Alzheimer's Dementia." *In ICASSP 2023-2023 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP),* pp. 1-2. IEEE, 2023.
- **Shi-ang Qi**, Neeraj Kumar, Jian-Yi Xu, Jaykumar Patel, Sambasivarao Damaraju, Grace Shen-Tu, and Russell Greiner. "Personalized breast cancer onset prediction from lifestyle and health history information." *Plos one* 17, no. 12 (2022): e0279174.

- Neeraj Kumar*, **Shi-ang Qi***, Li-Hao Kuan, Weijie Sun, Jianfei Zhang, and Russell Greiner. "Learning accurate personalized survival models for predicting hospital discharge and mortality of COVID-19 patients." *Scientific reports* 12, no. 1 (2022): 1-11. (co-first authors)
- **Shi-ang Qi***, Qian Wu*, Zhenpu Chen, Wei Zhang, Yongchun Zhou, Kaining Mao, Jia Li et al. "High-resolution metabolomic biomarkers for lung cancer diagnosis and prognosis." *Scientific reports* 11, no. 1 (2021): 1-10. (co-first authors)
- Zehra Shah, Jeffrey Sawalha, Mashrura Tasnim, **Shi-ang Qi**, Eleni Stroulia, and Russell Greiner. "Learning language and acoustic models for identifying alzheimers dementia from speech." *Frontiers in Computer Science* (2021): 4.
- **Shiang Qi**, and Jie Chen. "Safety Assessment of a Wearable Low-Intensity Pulsed Ultrasound Device for Relieving Mental Illness Symptoms" *In 2020 42nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), pp. 5240-5243.* IEEE, 2020.
- Xiaoxue Jiang, Oleksandra Savchenko, Yufeng Li, **Shiang Qi**, Tianlin Yang, Wei Zhang, and Jie Chen. "A review of low-intensity pulsed ultrasound for therapeutic applications." *IEEE Transactions on Biomedical Engineering* 66, no. 10 (2018): 2704-2718.
- **Shiang Qi**, Yufeng Li, Wei Zhang, and Jie Chen. "Design of a novel wearable lipus treatment device for mental health treatment." *In 2018 40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), pp. 6052-6055.* IEEE, 2018.

CHALLENGES/COMPETITIONS

ICASSP 2023 SPGC Challenge *Ranking:* **4-th Globally**
Multilingual Alzheimer's Dementia Recognition through Spontaneous Speech
The ADReSS Challenge *Ranking:* **3-rd Globally in Classification task**
Alzheimer's Dementia Recognition through Spontaneous Speech

HONORS

- Alberta Graduate Excellence Scholarship, $12,000 *2023*
- Graduate Recruitment Scholarship, $5,000 *2020*
- Mitacs Accelerate Scholarship, $25,000/year *2019*
- Excellent Student Leader at Huazhong University of Science and Technology (3%) *2014*
- Public Welfare Scholarship at Huazhong University of Science and Technology (2%) *2013 & 2014*
- Freshman Scholarship, Excellent League Member, Excellent Student in Science and Technology Innovation Activity at Huazhong University of Science and Technology *2013*

OPEN-SOURCE PACKAGES

`CSD` https://github.com/shi-ang/CSD
Enhace the calibration of a survival model, without compromising discriminative power.
`SurvivalEVAL` https://github.com/shi-ang/SurvivalEVAL
A comprehensive Python package for evaluating survival analysis models.
`CensoredMAE` https://github.com/shi-ang/CensoredMAE
An Effective Meaningful Way to Evaluate Survival Models.
`BNN-ISD` https://github.com/shi-ang/BNN-ISD
Feature selection and credible intervals computation for survival analysis.

SKILLS

Algorithms	ML/DL, Survival Analysis, Explainable AI, Causal Inference, Bioinformatics, Computational Psychiatry, Recommender Systems, Prompt Engineering
Programming	Python, R, SQL, Bash, C, Java, MATLAB
Libraries	PyTorch, Keras, TensorFlow, Scikit-learn

PROFESSIONAL SERVICE

Reviewer (**Conference/Journal**)

C	ICDM (2021), SPACA (2023), NeurIPS (2023, 2024)
J	IEEE TBioCAS (2017), IEEE JTEHM (2019), AIJ (2022)

INVITED TALKS

Title: An Effective Meaningful Way to Evaluate Survival Models **Record**
Laboratory of Data Science Seminar Series Purdue University Fort Wayne
Title: An Effective Meaningful Way to Evaluate Survival Models (short) **Record**
One Minute Research Alberta Machine Learning Institute

TEACHING ASSISTANCE EXPERIENCE

CMPUT 101	Introduction to Computing	Fall 2020/2023
CMPUT 261	Introduction to Artificial Intelligence	Fall 2022
CMPUT 366	Intelligent Systems	Winter 2021/2022
ECE 212	Introduction to Microprocessors	Winter 2020
ENCMP 100	Computer Programming for Engineers	Winter 2019
ECE 312	Embedded System Design	Fall 2018/2019
ECE 340	Discrete Time Signals and Systems	Fall 2017

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