SHI-ANG QI

University of Alberta, Edmonton, Alberta, Canada, T6H 1H9
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EDUCATION

University of Alberta, Edmonton, Canada Sept. 2020 - Present
Ph.D. in Computer Science GPA: 3.93/4.0
Thesis: Survival Prediction AAA: Applications, Assessment, and Algorithms
Supervisor: Dr. Russell Greiner

University of Alberta, Edmonton, Canada Sept. 2016 - May 2020
M.Sc. in Electrical and Computer Engineering GPA: 3.55/4.0
Thesis: Design and Safety Assessment of Wearable Transcranial Low-Intensity Pulsed Ultrasound Devices
Supervisor: Dr. Jie Chen

Huazhong University of Science and Technology, Wuhan, China Sept. 2012 - June 2016
B.Eng. in Biomedical Engineering GPA: 3.4/4.0

WORK EXPERIENCE

Microsoft Research AI, Redmond, WA, USA Oct. 2025 - Dec. 2025
Research Intern Immunomics, Health Future
Use Representation Learning to Find Embeddings for Heterogeneous, High-Dimensional, Sparse, and Unlabeled Immune Responses and Immune Cells.
Mentors: Dr. Paidamoyo Chapfuwa, Dr. Julia Greissl

University of British Columbia, Vancouver, Canada Oct. 2024 - Sept. 2025
Graduate Academic Assistant School of Population and Public Health
Breast Cancer Risk Assessment: 1) Identify variables from BCGP cohort that relevant for breast cancer prognosis; 2) Develop deep learning survival models to predict 5-year risk for pre- versus post-menopausal breast cancer, hormone receptor status positive or negative, and triple negative breast cancer.
Supervisor: Dr. Rachel Murphy

PUBLICATIONS

Conference Publications

1. Shi-ang Qi, Yakun Yu, Russell Greiner, "Toward Conditional Distribution Calibration in Survival Prediction." Advances in Neural Information Processing Systems 38 (NeurIPS 2024). [link]
2. Yakun Yu, Shi-ang Qi, Baochun Li, Di Niu, "PepRec: Progressive Enhancement of Prompting for Recommendation." Conference on Empirical Methods in Natural Language Processing (EMNLP), 2024. [link]
3. Shi-ang Qi, Yakun Yu, Russell Greiner, "Conformalized Survival Distributions: A Generic Post-Process to Increase Calibration." International Conference on Machine Learning (ICML), 2024. [link]
4. 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." Machine Learning for Health Symposium (ML4H), 2023. [link]

5. Shi-ang Qi, Weijie Sun, Russell Greiner. "SurvivalEVAL: A Comprehensive Open-Source Python Package for Evaluating Individual Survival Distributions." AAAI Symposium Series, 2023. [link]

6. 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." AAAI Symposium Series, 2023. [link]

7. Yakun Yu, Shi-ang Qi, Jiuding Yang, Liyao Jiang, Di Niu. "iHAS: Instance-wise Hierarchical Architecture Search for Deep Learning Recommendation Models." ACM International Conference on Information and Knowledge Management (CIKM), 2023. [link]

8. 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." International Conference on Machine Learning (ICML), 2023. [link]

9. 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." Findings of the Association for Computational Linguistics (ACL), 2023. [link]

10. 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." IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2023. [link]

11. Shiang Qi, and Jie Chen. "Safety Assessment of a Wearable Low-Intensity Pulsed Ultrasound Device for Relieving Mental Illness Symptoms." International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), 2020. [link]

12. Shiang Qi, Yufeng Li, Wei Zhang, and Jie Chen. "Design of a novel wearable LIPUS treatment device for mental health treatment." International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), 2018. [link]

Journals Articles

1. 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. [link]

2. 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. [link]

3. 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) [link]

4. Shi-ang Qi*, Qian Wu*, Zhenpu Chen, Wei Zhang, Yongchun Zhou, Kaining Mao, Jia Li, Yuanyuan Li, Jie Chen, Youguang Huang, and Yunchao Huang. "High-resolution metabolomic biomarkers for lung cancer diagnosis and prognosis." Scientific reports 11, no. 1 (2021): 1-10. (co-first authors) [link]

5. 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. [link]

6. 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. [link]

In Progress

1. Christian Marius Lillelund, Shi-ang Qi, Russell Greiner, Christian Fischer Pedersen. "Stop Chasing the C-index: This Is How We Should Evaluate Our Survival Models." [link]
2. Christian Marius Lillelund, Shi-ang Qi, Russell Greiner. "Overcoming Dependent Censoring in the Evaluation of Survival Models." [link]
3. Christian Marius Lillelund, Ali Hossein Gharari Foomani, Weijie Sun, Shi-ang Qi, Russell Greiner. "MENSA: A Multi-Event Network for Survival Analysis with Trajectory-based Likelihood Estimation." [link]
4. Mahtab Farrokh, Shi-ang Qi, Neeraj Kumar, Russell Greiner. "Effective Survival Prediction and Evaluation for Cancer Patients." [link]

CHALLENGES/COMPETITIONS

TAUKADIAL Challenge *Ranking:* **4-th Globally in Regression Task**
Explore speech as a marker of cognition in a global health context, using multilingual speech signal

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 CAD *2024*
- Alberta Graduate Excellence Scholarship, $12,000 CAD *2023*
- Graduate Recruitment Scholarship, $5,000 CAD *2020*
- Mitacs Accelerate Scholarship, $25,000 CAD per year *2019 – 2020*
- 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

`MakeSurvivalCalibratedAgain` https://github.com/shi-ang/MakeSurvivalCalibratedAgain
Improve the marginal and conditional calibration of a survival model, for high-censor-rate datasets.

`MENSA` https://github.com/thecml/mensa
MENSA: A Multi-Event Network for Survival Analysis under Informative Censoring.

`CSD` https://github.com/shi-ang/CSD
Enhance 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	AutoML, Bioinformatics, Causal Inference, Computational Psychiatry, Contrastive Learning, DL/ML, Explainable AI, Prompt Engineering, Multimodal Analysis, Recommender System, Representation Learning, Survival Analysis
Programming	Bash, C, Java, MATLAB, Python, R, SQL
Frameworks	HuggingFace, Keras, PyTorch, scikit-learn, TensorFlow

PROFESSIONAL SERVICE

Reviewer (**Conference/Journal**)

C	AAAI (2026), AISTATS (2025–26), BHI (2024), ICDM (2021), ICLR (2025–26), ICML (2025), IJCAI (2025), SPACA (2023), NeurIPS (2023–25)
J	AIJ, Engineering Applications of Artificial Intelligence, IEEE TBioCAS, IEEE TBME IEEE JTEHM, Information Sciences, Neurocomputing, PLOS ONE, Scientific Reports

INVITED TALKS

Survival Prediction Tutorial (Co-present with Dr. Russell Greiner) **Record**
Upper Bound AI Conference (2025) Edmonton, Canada

Improving Calibration w/o Compromising Discrimination for Survival Analysis **Record**
AI Seminar (2025) Alberta Machine Intelligence Institute (Amii)

An Effective Meaningful Way to Evaluate Survival Models **Record**
Laboratory of Data Science Seminar Series (2024) Purdue University Fort Wayne

An Effective Meaningful Way to Evaluate Survival Models (short) **Record**
One Minute Research (2023) Alberta Machine Intelligence Institute (Amii)

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

MENTORSHIP

Precious Ajilore Undergraduate Student Dept. of Computing Science, University of Alberta
Project: Improving Patient Experience: A Novel Approach to Urethroplasty Outcome Prediction

REFEREES

Russell Greiner PhD rgreiner@ualberta.ca
Professor Dept. of Computing Science, University of Alberta
Adjunct Professor Dept. of Psychiatry, University of Alberta
Fellow Alberta Machine Intelligence Institute

Grace Shen-Tu MPH, PhD — grace.shentu@ahs.ca
Acting Scientific Director — Albertas Tomorrow Project, Alberta Health Services

Ricardo Henao PhD — ricardo.henao@duke.edu
Associate Professor — Dept. of Biostatistics and Bioinformatics, Duke University
Assistant Professor — Dept. of Electrical and Computer Engineering, Duke University
Associate Professor — King Abdullah University of Science and Technology

Sunil Vasu Kalmady PhD — kalmady@ualberta.ca
Adjunct Professor — Dept. of Computing Science, University of Alberta
Senior Machine Learning Specialist — Canadian VIGOUR Centre

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