

Fairness with Censorship Challenge

Overview

Machine Learning (ML) fairness is an established area of research. Most assume availability of the class label, which is impractical in many real-world applications such as precision medicine, actuarial analysis and recidivism prediction. Here we consider fairness in longitudinal censored environments, where the time to event might be unknown, resulting in censorship on the class label and inapplicability of existing fairness studies. In this challenge, we introduce fairness with censorship, consisting of the following two tasks:

1. Quantifying ML unfairness with censorship.
2. Mitigating ML unfairness with censorship.

For the first task, we need to define discrimination in the presence of censorship, i.e., unavailability of the class label. For the second task, a debiasing algorithm that is able to address unfairness amidst censorship.

Datasets

The datasets contain censored individuals for various socially-sensitive tasks such as recidivism prediction, clinical prediction and marketing analytics. Please email your name, affiliation and address to wenbinzhang2008@gmail.com to download the datasets.

Evaluation

The overall score of the challenge will be evaluated as a combination of (i) The predictive performance of model predictions (i.e., concordance); (ii) The bias reduction in censoring settings (i.e., the fairness notion proposed in the first task).

Submission

A short paper (limit to 6 pages including reference and appendix if any) describing the proposed notions and algorithms for fairness with censorship along with results should be

submitted through the main conference submission website. The submission will be reviewed mainly based on:

- Originality and technical soundness of the proposed methodologies.
- Performance in described tasks.

Publication

Accepted challenge papers will be published in the IEEE ICMLA 2022 conference proceedings.

Organizers

Wenbin Zhang, Michigan Technological University

Zichong Wang, Michigan Technological University

Important Date

Paper submission due	September 18, 2022
Notification of acceptance	October 7, 2022
Camera-ready papers & pre-registration	October 14, 2022
IEEE ICMLA 2022 conference	December 12-15, 2022

The authors should submit their papers through the main conference submission website. Papers must correspond to the requirements detailed in the instructions to authors. Accepted papers must be presented by one of the authors in order to be published in the conference proceeding. All challenge submissions will be handled electronically. Detailed instructions for submitting a paper are provided on the conference home page at: <https://www.icmla-conference.org/icmla22/challenges.html>