



THE UNIVERSITY OF CHICAGO

Department of Statistics

STATISTICS COLLOQUIUM

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Supervised Learning without Discrimination

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Eckhart 133, 5734 S. University Avenue

Refreshments following the seminar in Jones 111

ABSTRACT

As machine learning increasingly replaces human judgment in decisions protected by anti-discrimination law, the problem of algorithmically measuring and ensuring fairness in machine learning is pressing. What does it mean for a predictor to not discriminate with respect to protected group (e.g. according to race, gender, etc)? We propose a notion of non-discrimination that can be measured statistically, used algorithmically, and avoids many of the pitfalls of previous definitions. We further study what type of discrimination and non-discrimination can be identified with oblivious tests, which treat the predictor as an opaque black-box, and what different oblivious tests tell us about possible discrimination.

Joint work with Mortiz Hardt and Eric Pierce