Anh-Huy Nguyen

Application to the NBER Digital Economics and Artificial Intelligence Tutorial

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Institution	University of California, Berkeley, Department of Economics
Graduate study	Ph.D. in Economics, August 2024–present (third year)
Research adviser	Chris Walters
Dissertation committee	Not yet finalized
Research interests	Algorithmic measurement, information design, labor economics, and digital markets

Graduate Study and Coursework

I am a third-year Economics PhD student at Berkeley and an NSF Graduate Research Fellow. I have completed the graduate core in economic theory, macroeconomics, and econometrics, followed by field courses in labor economics and industrial organization, as well as mathematical economics and applied econometrics. I completed Berkeley's labor and IO field exams, earning the highest possible score on the IO exam. My cumulative graduate GPA is **3.94/4.00** (49 letter-graded units; 56 total completed units).

Term	Course	Title	Units	Grade
Fall 2024	ECON 201A	Economic Theory	4	A
	ECON 202A	Macroeconomics	4	A
	ECON 240A	Econometrics	5	A
	ECON 295	Survey of Research in Economics	1	S
Spring 2025	ECON 201B	Economic Theory	4	A
	ECON 202B	Macroeconomics	4	A+
	ECON 210A	Introduction to Economic History	3	A
	ECON 240B	Econometrics	4	B+
	ECON 295	Survey of Research in Economics	1	S
Fall 2025	ECON 207A	Mathematical Economics	3	A
	ECON 220A	Industrial Organization	3	A+
	ECON 250A	Labor Economics	3	A
	ECON 375	GSI Pedagogy Workshop	2	S
	ECON 602	Individual Study for Doctoral Students	3	S
Spring 2026	ECON 220B	Industrial Organization	3	A
	ECON 220C	Special Topics in Industrial Organization	3	A
	ECON 244	Applied Econometrics	3	A
	ECON 251	Seminar in Labor Economics	3	A+

Courses and grades transcribed from the UC Berkeley enrollment summary through Spring 2026. S denotes satisfactory and is excluded from the GPA.

Research Interests and Ongoing Projects

My research is at the intersection of labor economics, industrial organization, and applied econometrics. I am interested in how algorithms and digital platforms generate and disclose information, and how those choices influence prediction, incentives, and economic outcomes. The two projects below study complementary aspects of this problem: how to construct informative rankings, and how sharing information changes competition.

1. Algorithmic Scoring, Fairness, and Measurement in Education

In ongoing work using Brazil's national college entrance exam (ENEM), I study how scoring rules can balance predictive accuracy against demographic inequality in student rankings. The data contain item-level responses to four subject exams, linked to university preferences, graduation, and labor-market outcomes. Although test scores are used to allocate educational opportunities, the underlying attribute they aim to measure—academic preparation—is not directly observed, and individual questions may be differentially informative across groups.

We evaluate alternative scoring systems using their ability to predict responses to held-out exam questions, rather than treating any single question or downstream outcome as an unquestioned measure of ability. This allows us to compare conventional item response theory scores with flexible machine-learning methods and to trace the frontier between out-of-sample predictive quality and positional inequality in student rankings. We also develop a theoretical framework that bounds otherwise unobserved changes in the academic preparation of admitted students under a restriction ruling out average reverse discrimination. The project speaks to a broader challenge in evaluating AI-assisted decisions: how should algorithms be judged when the underlying construct is latent and improvements in measured accuracy may have unequal consequences?

2. Offer Intelligence and Competition in Online Labor Markets

In a separate proposed collaboration with a digital job-search and recruiting platform, I study how disclosing information about competing job offers affects labor-market competition. The platform has considered an "Offer Intelligence" feature that would notify employers when a candidate receives another offer, potentially revealing its deadline, the competing employer, or compensation. Digital intermediaries can observe candidates' recruiting activity across firms, making possible forms of disclosure that were previously difficult to implement.

The economic effects are ambiguous. Greater transparency could prompt competing firms to make faster or more generous bids, improving wages conditional on receiving an offer. But it could also reduce firms' willingness to make the first offer: an employer bears initial screening costs while its offer may invite rivals to compete for the candidate. I have developed a sequential-offer framework to analyze this tradeoff and a proposed empirical strategy using variation in the availability and content of disclosures during a future rollout. The key outcomes would include first-offer probabilities, subsequent bidding, offer timing, accepted wages, and hiring. The project asks whether information tools that improve competition after offers are made can nevertheless discourage the formation of employment matches.

Why the NBER Tutorial

The tutorial is closely aligned with my interest in the design and evaluation of information systems. I would value the opportunity to learn from researchers studying digital markets and AI, especially work on measuring algorithmic performance without clear ground truth and on how new information technologies change the incentives of firms and workers.