Diversity and Fairness in Gig Economies

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Abstract: The research objective of this proposal is promoting diversity and fairness in online allocation of resources and tasks through the lenses of AI and Economics. The advent of online marketplaces has substantially improved the welfare of users and created new job opportunities for assigning workers to delivery tasks or matching riders to drivers. Such novel applications have given rise to a variety of societal challenges that call for a holistic approach in combining techniques from artificial intelligence, economics, and algorithm design. This project plans to bridge the gap between online matching and fair division to develop techniques that provide solutions that adhere to fairness and diversity requirements in large-scale and dynamic settings.