

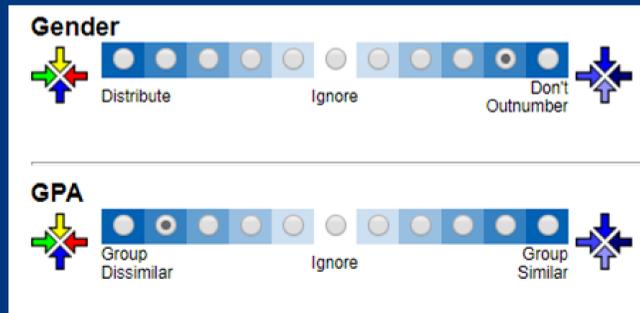
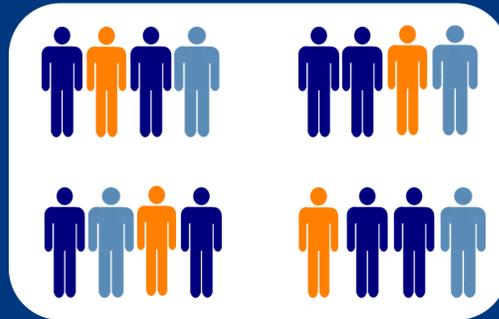


LIFT: Integrating Stakeholder Voices into Algorithmic Team Formation

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Background

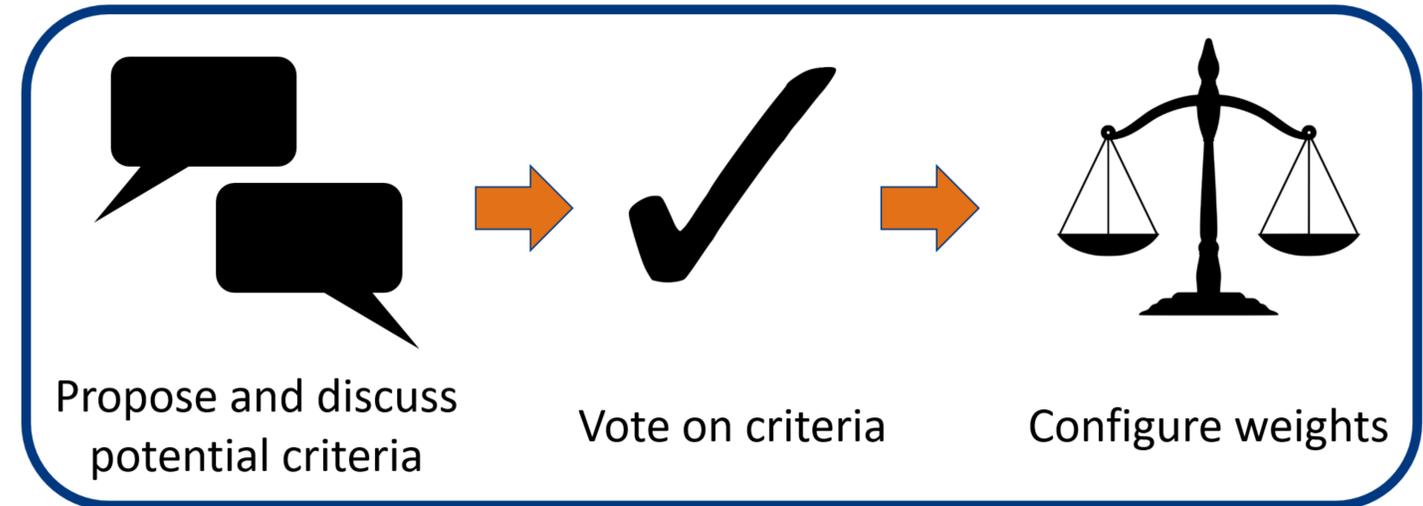
- Literature supports strategically selecting team members to achieve certain compositions
 - Skill diversity (e.g., Brickell et al. 1994, Horwitz and Horwitz 2007)
 - Balanced personality types (e.g., Lykourantzou et al. 2016)
 - Balanced genders (e.g., Jehn, Northcraft, and Neale 1999)
- Algorithmic team formation tools like CATME (info.catme.org) can help instructors implement this criteria-based process in their courses



- However, tools assume that the instructor should configure the criteria and weights used by the algorithm, giving students little input despite potential benefits

The “Learner Involvement in Forming Teams” Workflow

We proposed and evaluated LIFT, a “learnersourcing” workflow delegating the configuration of the team formation algorithm to students in the course where teams are formed.



Results

- Students selected rational criteria mostly focused on **scheduling, skills, and work habits**, whereas instructors prioritized **learning and long-term success** over minimizing present conflict
- Students **valued having a voice** in the team formation process and reported experiencing **high levels of agency** while using LIFT
- Students using LIFT achieved **comparable outcomes** (project grades, satisfaction, etc.) to those using the traditional instructor-led process
- Instructors were **generally in favor of LIFT**, but some raised concerns about excluding key criteria and potential gaming behavior
- Takeaway: possible to incorporate student input into algorithmic team formation without adversely affecting grades or team experiences**

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Full paper on ACM DL



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