Software Engineering

Project Name   **Open Review Conference Manager**

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The intended goal of our project was to create a more efficient manner of assigning, distributing papers for review at conferences as well as creating the schedule for the conference itself. The reason that we set out to do this is because currently conferences are typically managed by one person by hand. That individual would be assigning papers for review, distributing papers for review, and creating the schedule for the conference itself all on their own. Some of the major challenges that we encountered along the way when we took on this task include figuring out a feasible method for distributing papers to reviewers and also figuring out a way to assign rooms to a specific paper based on the review weight that is assigned to the paper in the review process. In order to overcome this challenge before us we generated a dictionary of lists whose keys were track objects. Tracks are the main body of our conferences and are determined by the type of paper the author is submitting (i.e. Robotics, Machine Learning, etc.). Using these predefined tracks, we sort through the full list of papers and sorted papers into separate lists based on their tracks. Then we go through each paper in each track and create a stack based on the number of reviewers per paper and randomly assign the paper to reviewers also in that track and write the distribution of papers to a json file for parsing to a viewing format later for the user. Next, we then create a schedule by taking the list of tracks, list of papers, number of days the conference is being held, number of sessions per day, and number of papers per session. After all this information is collected the schedule creator generates the total number of sessions needed to satisfy the number of papers per session, sessions per day, and number of days the conference is being held, then sorts the papers in order to place them in the sessions based upon their ranking after review. Once this has been done the schedule is written to a json file that is to be parsed and made more easily legible for the viewer to see. After all is said and done we have taken a process that would normally take the conference manager several weeks to coordinate and do and we have shortened that task down to a matter of minutes based upon the size of the number of papers and the number of reviewers. The Implications of this project include the drastic reduction in time that need be devoted to setting up a conference and thus more time can be spent on the scheduling and amenities of the conference itself. Future work that can be done upon this project would include making the program more extendable so that it will work across a wider variety of machines and create a full UI layer so that many users could use this product at once. This would also require a dedicated server in order to store the user's database information. Thus, Future work for this project would include making it more of a microservice and or executable that a multitude of users such as the IEEE could use in order to better manage their conferences and remove all the tedious work that would come with managing one by hand.