

Project Title: Sudoku Solvers

Team Members:

- Michael Richards - mrichards2021@my.fit.edu
- Jaden Krekow - jkrekow2021@my.fit.edu
- Alice Luce - pluce2021@my.fit.edu
- Adrian Rodriguez - adrianrodrig2019@my.fit.edu

Faculty Advisor: Raghuveer Mohan - rmohan@fit.edu

Client: Not Applicable

Progress Matrix:

To Do	Completion	Alice	Adrian	Jaden	Michael	To Do
User Manual	100%	60%	15%	15%	15%	
Bug Fixes	90%	90%	0%	0%	0%	Bug fixes
Bee Colony Search Visualizer	95%	0%	85%	0%	10%	Optimize visualizing
Hyper Arc Consistency Visualizer	100%	0%	0%	100%	0%	Complete
Poster	100%	15%	60%	10%	15%	Added visualization pictures and submitted

1. Discussion of each accomplished task for the current Milestone:
 - a. Bugs are fixed and polish has been applied. Nearly all user functionality is guaranteed
 - b. Hyper-arc visualization was implemented into the GUI interface. Small bug fixes were done to further optimize the algorithm as the algorithm was initially starting by guessing numbers instead of going straight into pruning. This fixed an issue where the algorithm would be backtracking often due to guessing a starting value for an open cell at the beginning.
 - c. Bee colony there was an issue going over the change made to a board as this algorithm does it through initially randomly filling cells and then performing swapping later. Bee colony now can be visualized and seen while producing a correct board
 - d. User Manual is complete and all functionality is documented for both users and developers
2. Discussion (at least a few sentences, ie a paragraph) of contribution of each team member to the current Milestone:
 - a. Alice Luce: Most of the debugging and the organization and much of the writing of the user manual. Essentially anything not done by the other three who were more predisposed with the final algorithms.
 - b. Adrian Rodriguez: Added buttons and attempts to polish the visualization section of the program. The bee colony is now able to be seen on the main board and visualize correctly, although it is one if not the most time consuming of the algorithms implemented. Reduced user error on visualization by removing actions the user could take during visualization that could disrupt board processes going forward.
 - c. Jaden Krekow: Added hyperarc visualization into the GUI interface. Fixed bug in hyperarc algorithm that guessed the assignment of an open cell at the beginning instead of immediately pruning values. This bug was resulting in slower solving times as it was often backtracking unnecessarily to correct the initial wrong guess. Adding descriptions for Database and Hyperarc Algorithm in user manual.
 - d. Michael Richards:
3. Discussion (at least a few sentences, ie a paragraph) of each planned task for the next Milestone
 - a. N/A
4. Date of meeting with Client during the current milestone:
 - a. N/A
5. Client feedback on the current milestone
 - a. see Faculty Advisor Feedback below
6. Date(s) of meeting(s) with Faculty Advisor during the current milestone:

- a. 4/16/2025 1:00pm
- 7. Faculty Advisor feedback on each task for the current Milestone
 - a. He liked the direction the project had gone with and the algorithms shown and how they were visualized. He indicated that it should be a bit faster with bee colony optimization and gave pointers about reducing large blocks of text in the poster to match guidelines. He suggested that if time had enabled to create a system where the user can interact with the visualizer such as going back throughout the visualization process to review cells the algorithm already covered.
- 8. Faculty Advisor Signature: _____ Date: _____

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Evaluation by Faculty Advisor

Faculty Advisor: detach and return this page to Dr. Chan (HC 209) or email the scores to pkc@cs.fit.edu

Score (0-10) for each member: circle a score (or circle two adjacent scores for .25 or write down a real number between 0 and 10)

Alice Luce	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Jaden Krekow	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Micheal Richards	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Adrian Rodriguez	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10

Faculty Advisor Signature: _____ Date: _____