

Total Tasks

- Fix project document
- Rough draft of UI/UX
- Research Matching algorithms
- Define and outline the database structure
- Define the operations needed for the backend & APIs
- Research requirements for using UTD netID authentication system
- Research virtual machine process for UTD

Tasks per Person

- Madison Hokstad - 3 Hours
 - Research Matching algorithms
- Do Kyung Lee - 5 Hours
 - Fix project document
 - Rough draft of UI/UX
- Alexandra Ontiveros - 5 Hours
 - Added Docker structure to github repo
 - Define and outline the database structure
- Gaby Salazar Mejia - 2 Hours
 - Research requirements for using UTD netID authentication system
 - Research virtual machine process for UTD
- Anh Tran - 3 Hours
 - Define the operations needed for the backend & APIs

Matching Algorithms:

- Hungarian algorithm
 - Finds the optimal satisfaction for pairing professors to graders, rather than whichever is assigned first

- Requires defining a formula to quantify the fitness of each professor-grader pair
- These values are put in a matrix to run the algorithm, which will return the set of optimal professor-grader pairs
- Add dummy rows to account for the number of applicants being greater than the number of positions
- Edge cases like continuing employment or recommended candidates can be strictly defined and tested for validity before running, and both professor and student will be removed from the pool if the candidate is acceptable.

Backend Operations:

- Parsing operations for pdf files
- Function for parsing and generating csv files.
- Function for parsing and generating excel files.
- Functions for CRUD operations onto the database with the data parsed from csv/excel files..
- Filtering operations for matching information from csv/excel files and descriptions from pdf files.
- Matching algorithm function that assigns graders to the best-fit courses.
- Function for taking into account recommendations from professors for the matching algorithm.
- CRUD operations for hiring manager upon the completion of the assignments.

UTD netID Authentication:

- Permission to use the UTD's two-factor authentication, DUO, can only be given to staff.

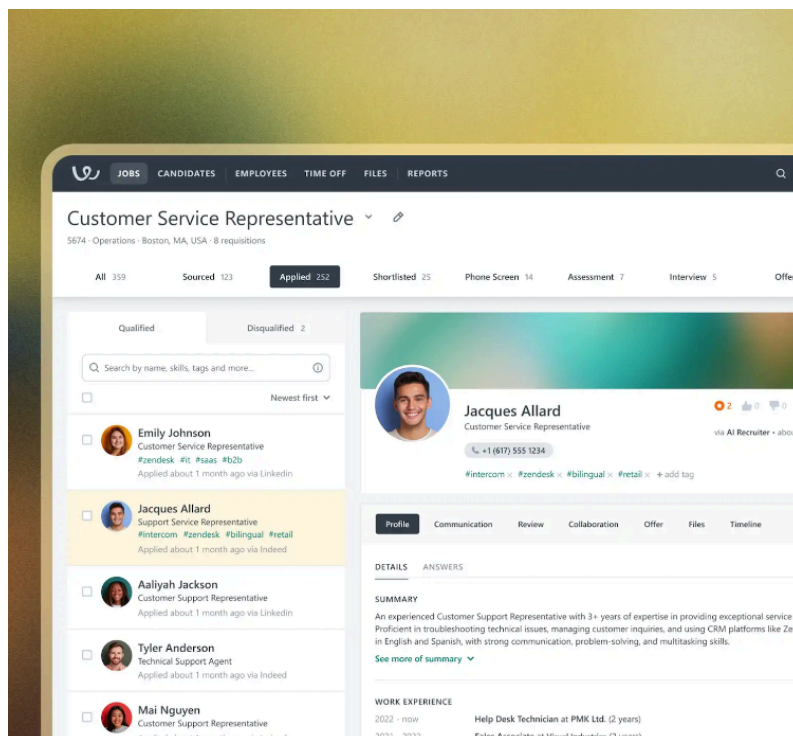
- Office of Information Technology

UTD Virtual Machine:

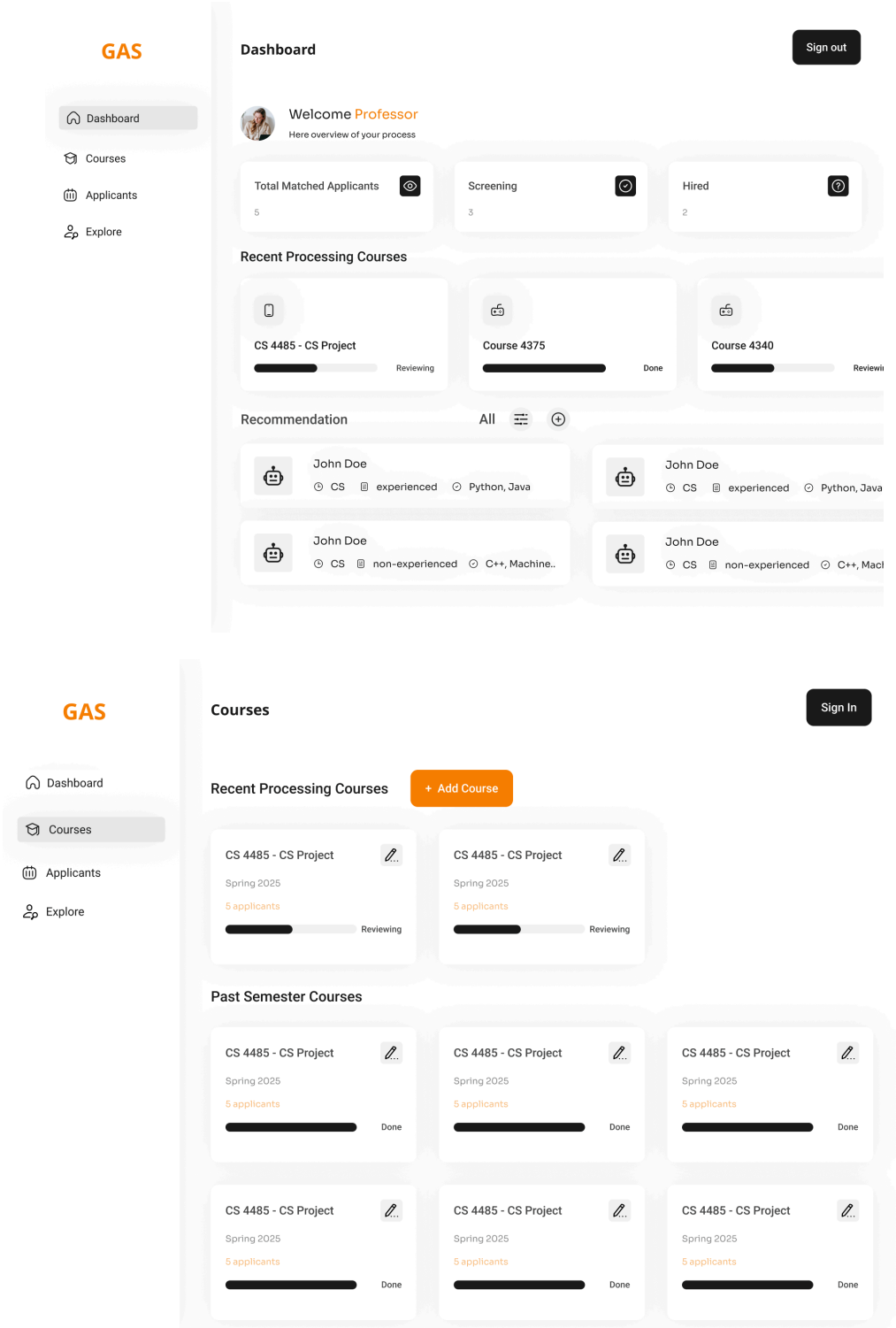
- UTD configures virtual machines to meet a certain set of specifications.
ngvb
- These virtual machines provide the functionality of physical machines without the associated space and maintenance costs.
- Steps to Request a New VM:
 - Submit a request
- Costs vary depending on what is required of the virtual machine.
- <https://atlas.utdallas.edu/TDClient/30/Portal/Requests/ServiceDet?ID=117>

UI/UX Draft:

- Reference UI



- Draft UI
- [Professor Side UI]



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Course



Description

Preferences

Skills

C/C++



Java



Behavior

Detail Oriented



Detail Oriented



Organized



Communication

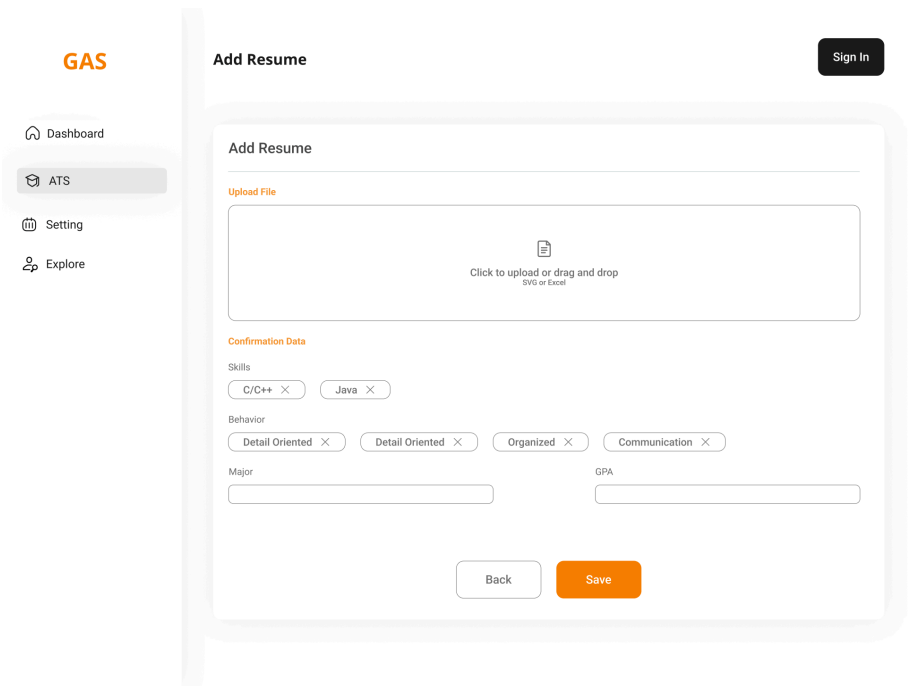
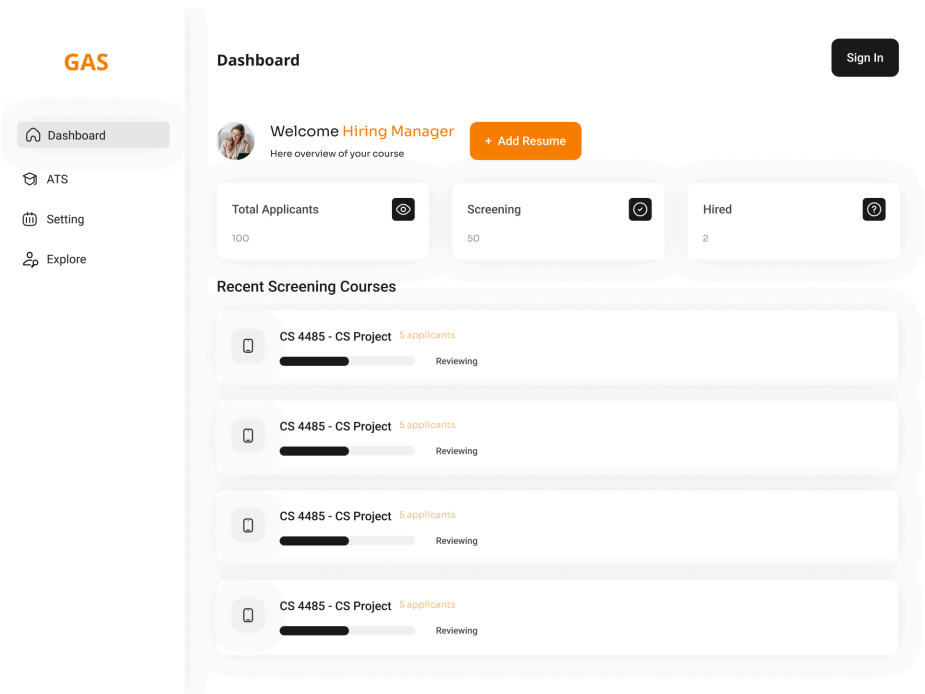


Major

Minimum GPA

Experiences

[Hiring Manager Side UI]



Database Structure:

