DE Review Session

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Introduction:

Building a Flask app to predict the 2025 March Madness seeds and Final Four teams was a valuable group experience. The project gave us the chance to explore Flask development, including setting up routes, connecting a Python backend, and building dynamic HTML interfaces. Developing the prediction model required data analysis and preprocessing to ensure the predictions were accurate and meaningful.

One of the main challenges the team faced was handling large datasets while keeping the prediction model efficient and accurate. Additionally, designing a user-friendly interface took some effort, as we had to iterate to get the UI right. For deployment, we pushed the repository and image to ECR and used AWS App Runner to deploy the app, which taught us about server configuration and scalability. The project highlighted the importance of teamwork and combining different skill sets to build a functional application. Going forward, we plan to improve the prediction model, enhance the UI, and explore additional features.

Arko:

1. Danish

- Strengths
  - Danish brought exceptional expertise to the modeling process, especially in using GAM models and fine-tuning predictors.
  - His curiosity during group discussions helped the team refine ideas and better understand each other's contributions.
  - He excelled at leading technical processes like ETL and database creation, ensuring a solid foundation for the project.

- Improvements
  - Continuing to explore advanced methodologies could further strengthen future projects and introduce new perspectives.
  - Sharing his technical expertise more openly during team sessions could enhance collaboration.
  - Scheduling meetings was occasionally challenging due to time zones, but he adapted well when needed.

2. Nakiyah

- Strengths
  - Nakiyah's focus and dedication to building the Flask application were instrumental in presenting the team's work effectively.
  - Her attention to detail ensured that the project components were polished and professional.
  - She consistently participated in meetings and stayed collaborative, even when managing a demanding schedule.

- Improvements
  - Balancing her attention to detail with a broader focus on project goals could enhance efficiency.
  - Sharing her knowledge of Flask through quick sessions could have been a great learning opportunity for the team.
  - Coordinating across time zones was a minor challenge, but her efforts ensured it didn't impact the project significantly.

3. Vishesh

- Strengths
  - Vishesh's deep understanding of NCAA basketball provided the team with valuable context, helping connect domain knowledge with technical work.
  - He confidently led statistical discussions and contributed strong technical insights that shaped the project's success.
  - His goal-oriented approach kept the team on track and motivated to deliver high-quality work.

- Improvements
  - Sharing ideas earlier during brainstorming sessions could inspire even more creative approaches.
  - Exploring new tools or techniques could add variety and further strengthen future projects.
  - He worked well within deadlines, and adding small buffers could make timelines even smoother.

Danish:

1. Arko

- Strengths
  - Utilized his strong data engineering skills to foster innovative ideas and functioned as a leader who taught us a lot throughout the project

- He worked diligently throughout the project and worked with other group members to create technical solutions.
- Great communication skills and could convey complex ideas effortlessly

Improvements
- Arko's collaborative approach is impressive, and involving the team even more could make projects even stronger.
- His solutions are always thoughtful, and adding flexibility could make them even more adaptable to changing needs.
- Arko is a great mentor, and spending more time teaching others could further elevate the team's skills.

2. Nakiyah

- Strengths
  - Nakiyah worked very hard to create a flask application that effectively showcased our group's statistical models and integrated with our project
  - She took the initiative in beginning tasks, functioned as an engine for our team.
  - Nakyiah displayed good attention to detail and delivered products that were well-polished
- Improvements
  - Use your attention to detail to suggest new features or improvements.
  - Coordination was difficult due to the time zone difference, but it worked in the end.
  - Took great initiative on creating the Flask app. It could have been helpful to have sessions for the team to learn

3. Vishesh

- Strengths:
  - Demonstrated a confident and motivational presence, inspiring our team to adopt a disciplined mindset and pursue self-improvement.
  - Strong understanding of the CBB NCAA bracket and did a great job explaining it to team members who didn't have basketball domain knowledge.
  - Deep technical understanding of statistical processes and data engineering techniques, which were crucial to the success of the project.
- Improvements:
  - You contributed greatly; sharing your ideas earlier during discussions could inspire even more creative solutions.
  - Your implementation was solid; experimenting with newer tools or frameworks could help push the project's boundaries further.
  - Your expertise was invaluable; hosting brief knowledge-sharing sessions could help the team learn from your innovative approaches.

Nakiyah:

1. Arko

- Strengths
  - He has strong communication skills and excels at breaking down and explaining complex workflows effectively.
  - He has a solid grasp of technical skills, which makes it easier to brainstorm and resolve bugs or problems in code.
  - He demonstrated exceptional patience and persistence in fixing significant bugs and addressing other coding issues.
- Improvements
  - Coordinating meetings was slightly challenging due to different time zones.
  - His work hours often begin late at night, occasionally making it harder to schedule meetings.
  - With his strong technical knowledge, he could look into more innovative ideas and approaches to solving problems

2. Danish

- Strengths
- He has strong expertise in modeling seeds and predictors using GAM models and other techniques.
- He is a good team player and collaborates effectively to improve model parameters and fine-tuning.
- He has a solid background in AWS, providing valuable guidance in the app deployment and S3 usage processes.

- Improvements
- Scheduling meetings is sometimes difficult due to time zone differences.
- He would benefit from explaining his models more thoroughly to the team, enabling better understanding and collaboration.
- He would benefit from improving his technical skills

3. Vishesh

- Strengths
  - He has a strong grasp of technical skills, which facilitates effective brainstorming to resolve bugs and coding problems.
  - He has excellent domain knowledge and explained the March Madness and basketball terminology in a clear and engaging way.
  - He is skilled at setting team goals and ensuring the project moves forward at a good pace.
- Improvements

- Meetings can be challenging to schedule due to time zone differences.
- He could improve by adding more buffer time between deadlines to accommodate unforeseen challenges.
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Vishesh:

1. Danish

- Strengths
  - He has a strong grip on all the concepts taught in DE this semester and led the process of ETL, DB creation and Gam modeling.
  - He was very easy to work with and collaborate with on possible approaches towards code
  - He was curious in nature by asking multiple questions during group meetings through which I was able to understand my peers' code even better and improve my presentation skills.
- Improvements
  - He should try to experiment with even more advanced methodologies as that could elevate the overall team output.
  - Leading brainstorming sessions around the GAM model to help knowledge transfer would have been helpful.
  - Not being in the same time zone affected possible meeting times which was an issue

2. Nakiyah

- Strengths
  - She was well focused on one task and managed to do that in its fullest and best capacity
  - She was fast to get her work done and had great attention to detail
  - Collaborated well despite travelling to the other side of the world and participated in all team meeting
- Improvements
  - She gets flustered with multitasking
  - She would focus on the minute details a bit too much which would delay the progress of her work which was not needed
  - Not being in the same time zone affected possible meeting times which was an issue

3. Arko

- Strengths

- Extremely strong technical knowledge with patience to withstand code problems and overcome it
- Great communicator and was able to ensure knowledge transfer took place correctly
- He had good research skills to find varying solutions and trying to find the most optimal path of resolution
- Improvements
  - Leading brainstorming sessions to encourage team members to explore and adopt alternative approaches could amplify creativity.
  - He prefers working late at night which could force delays for individuals that work through the morning.
  - While he excels in technical knowledge and communication, taking on a more proactive leadership role by guiding the team through decision-making processes and setting clear goals could further enhance team alignment and productivity.

Final Meeting:

During our final meeting, the team reflected on the entire project, sharing feedback and discussing our strengths, challenges, and areas for improvement. Overall, the project was a great success due to the contributions of each team member. While there were challenges, particularly with time zone differences and balancing tasks, the team worked well together to overcome them. Documentation, task allocation, and leveraging individual expertise played key roles in the successful completion of the project. The shared experience was both rewarding and educational, and the team collectively agreed that we had a productive and enjoyable collaboration. The insights gained from this project will guide us in future endeavors, enabling us to work more efficiently and effectively as a team.