

## **Deliverable #3: UML Diagrams - Talent-Link**

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## Executive Summary

**To:** Katherine Syvanych, Director - Center for Student Involvement

**Prepared By:** Talent-Link

**Date:** October 23, 2025

Talent-Link is a student-facing platform designed to increase peer-to-peer collaboration, surface the wide range of skills we have at Kent State University, and make it easier for students to find and offer help. By connecting students who have skills with those who want to learn them, Talent-Link aims to support CSI's goals of improving engagement, building a sense of community, and broadening students' academic experience.

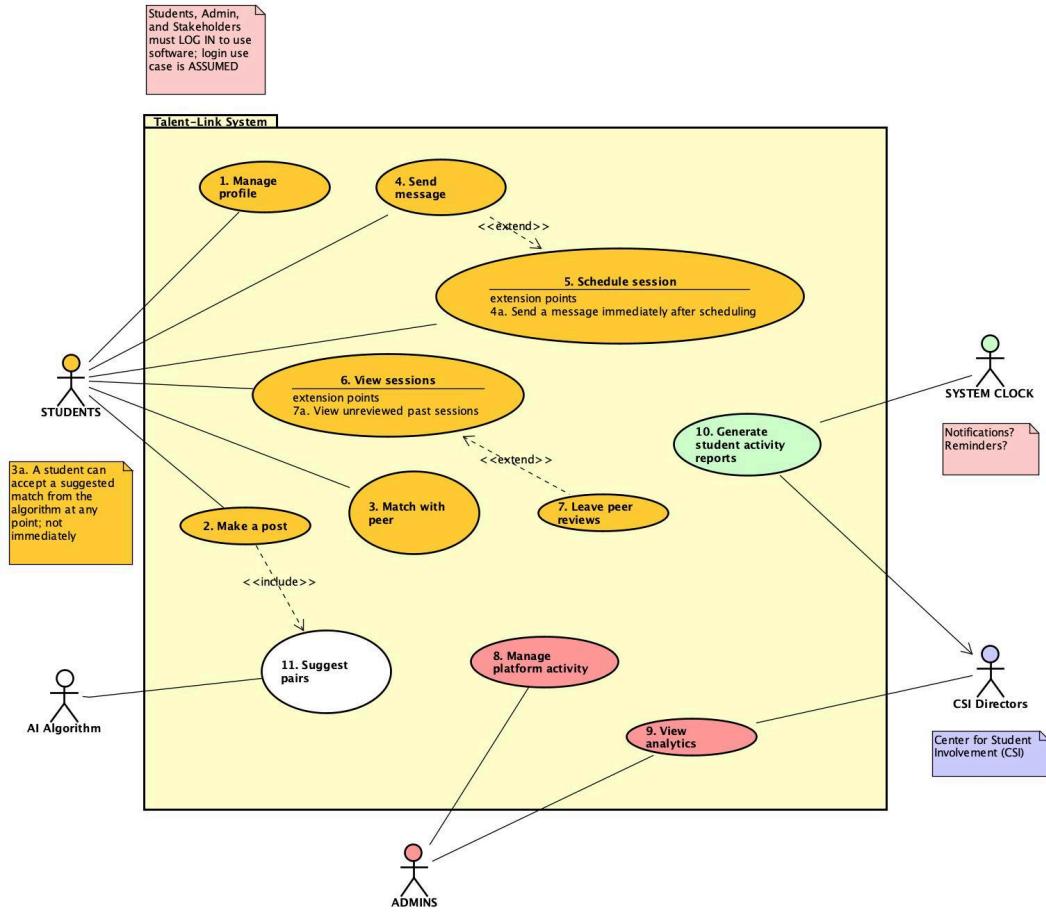
This deliverable translates our previous business analysis into formal system models that help CSI in making informed decisions about the proposed platform and allow you to quickly verify that the system will accurately support the business needs you care about. Briefly, here is what each artifact attached shows and why it matters to CSI:

- Our Use Case Diagram is a one-page view of the platform's core functionalities (profiles, posting, messaging, scheduling, matching, reviews, analytics, and reporting). It shows who does what, and helps confirm we captured the features that CSI expects. This ensures that the project scope aligns with CSI's priorities before we proceed with design work.
- The accompanying Use Case Descriptions are plain English explanations of each function; what triggers it, who uses it, and its flow of actions. These short descriptions let CSI validate that the platform workflow meets real student needs and administrative requirements.
- The Class Diagram is a clear map of the system's key data elements such as Student, Skill, Session, Match, and how they relate to each other. This ensures that the system stores all of the necessary information to support CSI's needs.
- Finally, the CRUD Matrix is used as a validation check to ensure that every business function connects to the right data objects and that no necessary data or use cases have been overlooked. This helps reduce the risk of costly rework later on.

These models show that Talent-Link can deliver measurable value to CSI such as increased student engagement, visibility into campus skill gaps via analytics, and a moderated and trusted environment for peer learning. If you approve of the directions shown in the models, our next step will be converting these models into a prioritized product backlog and sprint plans to produce an initial prototype. That prototype will let us demonstrate core functionality (matching, scheduling, messaging, and reviews).

Our team welcomes feedback on any of the attached diagrams and descriptions. Please let us know of any corrections or priorities that you want us to emphasize before we move forward.

## Use Case Diagram



### Explanation:

Our use case diagram illustrates what different actors using the system are able to do. Students can:

1. Manage profiles (this includes creating their profile) to showcase the skills they are offering and the skills they are aiming to learn. Other students are able to get a glimpse at their peers' backgrounds to help them decide if they would be a good match.
2. Make a post. Students can make different types of posts (requesting a skill-sharing match, announcing an event, or a general post).
3. Match with peers to connect based on shared interests or complementary skills.
4. Send a message to connect further with peers.
5. Schedule a session for skill sharing. When they schedule a session, they are prompted to send a message to further coordinate, but they do not have to.
6. View sessions to review upcoming sessions or look back at past sessions. They are able to leave a review once they have looked at their past sessions.
7. Leave peer review. They must choose a completed session from the "view sessions" tab first.

Admins are able to manage platform activity. This ensures that the platform is a safe and respectful space for students to exchange skills and information, and that student behavior is appropriate. Through this use case, they are able to report or flag students as needed. Admins and CSI Directors are able to view analytics to help them better understand students' interests and needs. The System Clock automatically generates student activity reports that are sent to CSI Directors for review. The AI algorithm analyzes students' profiles and activity to suggest pairs. Students are able to accept or reject the suggestions based on their preferences.

## “Overview / Essential” Use Case Descriptions

Use Case Name: Manage Profile	ID: 1	Importance Level: Medium-High		
Primary Actor: Student	Use Case Type: Overview/Essential			
<b>Stakeholders and Interests:</b>				
<p>Students- Need to create and manage their profiles to accurately showcase their skills, interests, and learning goals, which helps them find compatible skill-sharing partners.</p> <p>CSI Directors- Use profile information in the generated reports to identify skills trends and program effectiveness.</p> <p>Career Service Directors- Work with Talent-Link from time to time to identify gaps and provide targeted career support and resources based on profile information.</p>				
<b>Brief Description:</b> This use case allows students to create and manage personal and public information.				
<b>Trigger:</b> When a user (student) wants to manage their profile information.				
<b>Type:</b> External				
<b>Relationships:</b>				
<p><b>Association:</b> Student</p> <p><b>Include:</b> N/A</p> <p><b>Extend:</b> N/A</p> <p><b>Generalization:</b> N/A</p>				
<b>Normal Flow of Events:</b>				
<ol style="list-style-type: none"> <li>1. Student logs into the Talent-Link system.</li> <li>2. Student navigates to the “Manage Profile” option from the main menu.</li> <li>3. System displays the student’s current profile information.</li> <li>4. To edit profile information, the student clicks “Edit” under the section they wish to update.</li> <li>5. System displays an editable profile section.</li> <li>6. Student makes desired changes and clicks the “Save” button.</li> <li>7. System updates the information and displays it in the user profile.</li> </ol>				
<b>SubFlows:</b>				
<b>Alternate/Exceptional Flows:</b>				

Use Case Name: Make a post	ID: 2	Importance Level: Medium-High
Primary Actor: Student	Use Case Type: Overview/Essential	
<b>Stakeholders and Interests:</b>		
Students- Need to create posts to request skill-sharing matches, announce events, or share information with peers.		
CSI Directors- Analyze student engagement in posts and events through generated reports, helping identify trends in collaboration and participation across programs.		
Career Service Directors- Work with Talent-Link from time to time to use post information for career guidance.		
<b>Brief Description:</b> Allows students to make posts requesting skill matches, announcing events, or sharing general information for collaboration.		
<b>Trigger:</b> When a user (student) wants to learn or offer a new skill, or create an event to skill share.		
<b>Type:</b> External		
<b>Relationships:</b>		
Association: Student		
<b>Include:</b> Suggest Pairs - submitting a post automatically triggers AI matching to suggest peer pairs.		
<b>Extend:</b> N/A		
<b>Generalization:</b> N/A		
<b>Normal Flow of Events:</b>		
<ol style="list-style-type: none"> <li>1. Student logs into the Talent-Link system.</li> <li>2. Student navigates to the “Make a Post” option from the home menu.</li> <li>3. Student selects type of post from dropdown menu (e.g., event, skill request, or general post)</li> <li>4. Student enters the necessary information, including descriptions, attachments, or dates.</li> <li>5. Student clicks “Submit Post.”</li> <li>6. The post is viewable by other users.</li> </ol>		
<b>SubFlows:</b>		
<b>Alternate/Exceptional Flows:</b>		

Use Case Name: Match with Peers	ID: 3	Importance Level: Medium-High		
Primary Actor: Student	Use Case Type: Overview/Essential			
Stakeholders and Interests:				
<p>Student- Needs to match with peers to network and share skills.</p> <p>CSI Directors- Oversee matching trends and patterns through the generated reports.</p> <p>Career Service Directors- Occasionally work with Talent-Link to review insights on student connections and skill development outcomes.</p>				
Brief Description: Allows students to connect with peers either manually or through AI-suggested matches.				
Trigger: When a user (student) wants to connect with peers or approve an AI match.				
Type: External				
Relationships:				
<p>Association: Student</p> <p>Include: N/A</p> <p>Extend: N/A</p> <p>Generalization: N/A</p>				
Normal Flow of Events:				
<ol style="list-style-type: none"> <li>1. Student logs into the Talent-Link system.</li> <li>2. Student clicks the “Search” button and types the known user’s name.</li> <li>3. The system populates the user profile.</li> <li>4. Student clicks the “Connect” button</li> <li>5. Match is added to the student’s “Connections” list</li> </ol>				
SubFlows:				
Alternate/Exceptional Flows:				
<p>2a. The system identifies an AI-suggested match.</p> <ol style="list-style-type: none"> <li>1. Notification shows suggested match.</li> <li>2. Student clicks “Approve” or “Deny” match.</li> <li>3. If approved, the match is added to the student's “Connections” list.</li> </ol>				

Use Case Name: Send Message	ID: 4	Importance Level: Medium-High		
Primary Actor: Student	Use Case Type: Overview/Essential			
Stakeholders and Interests:				
<p>Student- Need to message to confirm meetings and connect online with peers.</p> <p>CSI Directors- Oversee how messaging supports student engagement, collaboration, and overall involvement on the platform.</p> <p>Career Services Directors- Occasionally work with Talent-Link to evaluate how peer communication supports career readiness and professional networking.</p>				
Brief Description: This use case allows students to message peers for collaboration.				
Trigger: When a user (student) wants to message a current or potential connection.				
Type: External				
Relationships:				
<p>Association: Student</p> <p>Include: N/A</p> <p>Extend: N/A</p> <p>Generalization: N/A</p>				
Normal Flow of Events:				
<ol style="list-style-type: none"> <li>1. Student logs into the Talent-Link system.</li> <li>2. From the “Home” page, the user clicks the “Message” icon.</li> <li>3. The user selects the connection to send the message ‘to’ and enters their desired message.</li> <li>4. The user clicks the “Send” button.</li> <li>5. A message is sent to the desired connection.</li> </ol>				
SubFlows:				
Alternate/Exceptional Flows:				
<p>2a. Message is prompted automatically by scheduling a session.</p> <ol style="list-style-type: none"> <li>1. Student enters desired message/additional details about session.</li> <li>2. The student clicks Send, and the message is delivered.</li> </ol>				

Use Case Name: Schedule Session		ID: 5	Importance Level: Medium-High		
Primary Actor: Student	Use Case Type: Overview/Essential				
Stakeholders and Interests:					
<p>Student- Needs to find mutually available times to meet with peers for skill-sharing sessions.</p> <p>CSI Directors- Oversee student collaboration and engagement through peer sessions.</p> <p>Career Services Directors- Occasionally work with Talent-Link to monitor how peer sessions contribute to skill development and career readiness.</p>					
Brief Description: This use case allows students to coordinate availability with peers.					
Trigger: When a user (student) wants to schedule a skill-sharing session.					
Type: External					
Relationships:					
<p>Association: Student</p> <p>Include: N/A</p> <p>Extend: 4a. Sometimes when a student schedules a session, they send a message.</p> <p>Generalization: N/A</p>					
Normal Flow of Events:					
<ol style="list-style-type: none"> <li>1. Student logs into the Talent-Link system.</li> <li>2. From the “Home” screen, the user clicks the “Meetings” button.</li> <li>3. Student selects the “New Meeting” icon.</li> <li>4. The User selects meeting criteria (ie, desired skill to learn, their availability, peer they would like to meet with) and selects “Schedule”.</li> <li>5. The smart scheduling tool generates suggested meeting times.</li> <li>6. The user selects meeting suggestions that work for them and clicks “Submit.”</li> <li>7. The system sends a meeting request to the selected peer.</li> <li>8. The peer reviews the request and clicks Approve or Deny.</li> </ol>					
SubFlows:					
Alternate/Exceptional Flows:					

Use Case Name: View Sessions		ID: 6	Importance Level: Medium-High		
Primary Actor: Student	Use Case Type: Overview/Essential				
Stakeholders and Interests:					
<p>Student- Needs to track upcoming sessions and review past ones for organization and progress tracking.</p> <p>CSI Directors- Monitor participation trends to assess engagement and collaboration among students.</p> <p>Career Services Directors- Occasionally work with Talent-Link to understand how completed sessions contribute to students' professional and skill development.</p>					
Brief Description: This use case allows students to view upcoming sessions or view past sessions.					
Trigger: When a user (student) wants to look up past or upcoming sessions.					
Type: External					
Relationships:					
<p>Association: Student</p> <p>Include: N/A</p> <p>Extend: 7a. If I view a past session, sometimes I can leave a review</p> <p>Generalization: N/A</p>					
Normal Flow of Events:					
<ol style="list-style-type: none"> <li>1. Student logs into the Talent-Link system.</li> <li>2. From the “Home” screen, the user clicks the “Meetings” icon.</li> <li>3. The system populates the ‘Meetings’ page with all meetings separated by ‘Past’ and ‘Upcoming’.</li> </ol>					
SubFlows:					
Alternate/Exceptional Flows:					

Use Case Name: Leave Peer Review		ID: 7	Importance Level: Medium		
Primary Actor: Student		Use Case Type: Overview/Essential			
Stakeholders and Interests:					
<p>Students- Want to provide feedback on peers after meetings or collaborations.</p> <p>CSI Directors- Use reviews to measure student collaboration quality and engagement.</p> <p>Career Services Directors- Occasionally work with Talent-Link to assess how peer reviews reflect teamwork and communication skills relevant to career readiness</p>					
Brief Description: After a peer meeting or collaboration, a student can leave a review for another student within the system. This supports accountability, community building, and helps track positive involvement					
Trigger: A student completes a meeting or collaboration and chooses to leave a review.					
Type: External					
Relationships:					
<p>Association: Student</p> <p>Include: N/A</p> <p>Extend: N/A</p> <p>Generalization: N/A</p>					
Normal Flow of Events:					
<ol style="list-style-type: none"> <li>1. The student logs into the Talent-Link system.</li> <li>2. The student navigates to the “Meetings” page.</li> <li>3. The student selects the peer they met with.</li> <li>4. The system prompts a short review form.</li> <li>5. The student rates and/or comments on the interaction.</li> <li>6. The system saves the review and notifies the other student if appropriate.</li> <li>7. The admin can view aggregated feedback for trend analysis.</li> </ol>					
SubFlows:					
Alternate/Exceptional Flows:					

Use Case Name: Manage Platform Activity		ID: 8	Importance Level: Medium-High		
Primary Actor: Admin	Use Case Type: Overview/Essential				
Stakeholders and Interests:					
Students- Expect fair moderation and protected privacy.					
CSI Directors- Review moderation reports to ensure student behavior on the platform aligns with campus community standards.					
Career Services Directors- Occasionally review platform activity to assess professional conduct and skill development opportunities.					
Brief Description: Admins monitor activity on the platform to verify users, review reports, and flag or resolve inappropriate content or behaviors.					
Trigger: The system either automatically flags an issue, or an admin finds an issue during a regular review.					
Type: External					
Relationships:					
Association: Admin					
Include: N/A					
Extend: N/A					
Generalization: N/A					
Normal Flow of Events:					
<ol style="list-style-type: none"> <li>1. Admin logs into the Talent-Link system.</li> <li>2. The system displays a dashboard of recent reports or flagged activity.</li> <li>3. Admin reviews reported interactions or feedback.</li> <li>4. Admin verifies whether the content violates community guidelines.</li> <li>5. Admin flags or removes inappropriate posts/reviews if necessary.</li> <li>6. Admin documents resolution and updates system logs.</li> <li>7. Admin tracks overall trends to identify recurring issues.</li> </ol>					
SubFlows					
Alternate/Exceptional Flows:					

#### Questions/Assumptions:

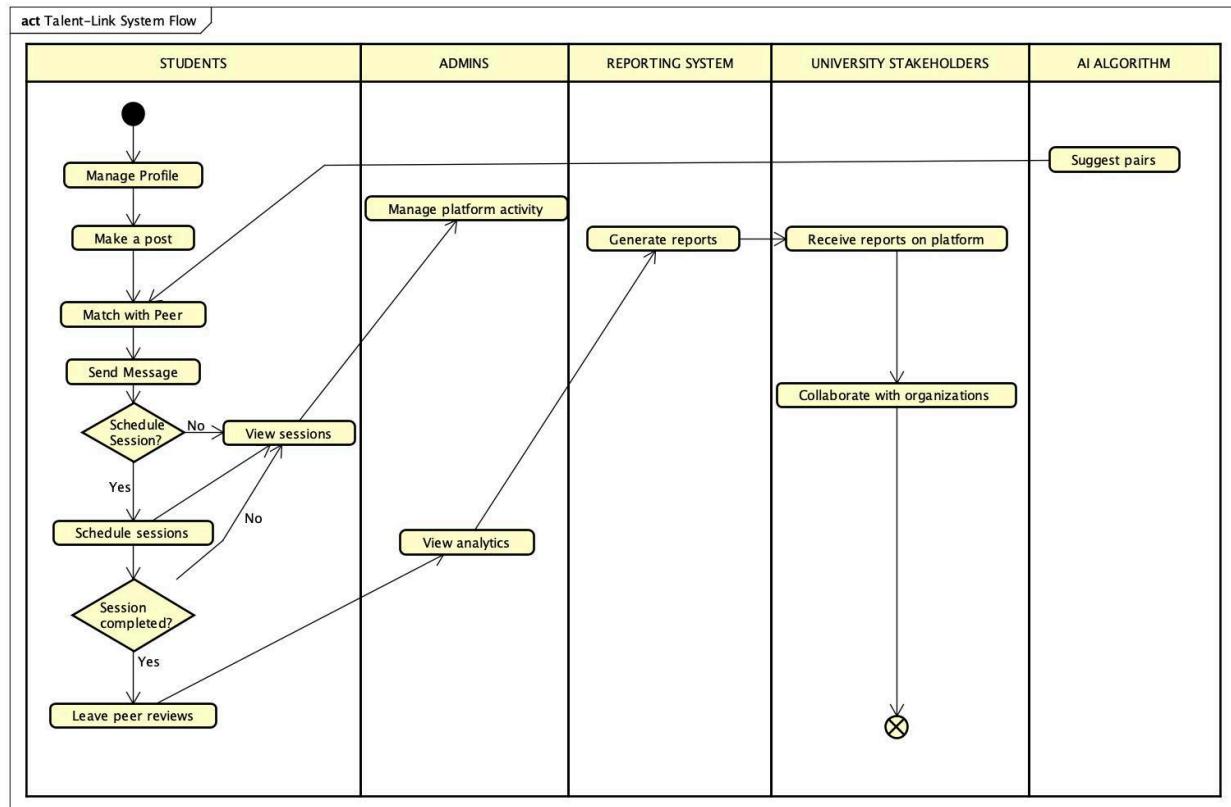
1. What are the specific moderation guidelines (language, behavior, etc.)?
2. Should all flagged content be reviewed manually, or can automation assist?

Use Case Name: View Analytics	ID: 9	Importance Level: Medium-High		
Primary Actor: Admin, CSI Directors	Use Case Type: Overview/Essential			
Stakeholders and Interests:				
CSI Directors- Need to monitor engagement trends and student participation to evaluate the system's success and identify improvement opportunities.				
Career Services Directors- Occasionally use analytics to assess how platform activity contributes to skill development and career readiness outcomes.				
Students- Indirectly benefit by having their engagement monitored to improve platform opportunities.				
Brief Description: This use case allows admins and CSI directors to view summarized data about platform usage, skill-sharing activity, and engagement levels.				
Trigger: When an admin/CSI Director selects "View Analytics" from the system dashboard.				
Type: External				
Relationships:				
Association: Admin, CSI Director				
Include: N/A				
Extend: N/A				
Generalization: N/A				
Normal Flow of Events:				
<ol style="list-style-type: none"> <li>1. Admin or CSI Director logs into the Talent-Link system.</li> <li>2. Admin or CSI Director navigates to the analytics section.</li> <li>3. System retrieves and displays key metrics.</li> <li>4. Admin or CSI Director applies filters or time ranges as necessary.</li> <li>5. Admin or CSI director reviews the analytics data or exports insights.</li> </ol>				
SubFlows:				
Alternate/Exceptional Flows:				
3a. Analytics data is unavailable or delayed:				
<ol style="list-style-type: none"> <li>1. The system displays an alert: "Analytics data currently unavailable. Please refresh later."</li> <li>2. The user can retry viewing the analytics later.</li> </ol>				

Use Case Name: Generate Student Activity Reports		ID: 10	Importance Level: Medium-High		
Primary Actor: System Clock		Use Case Type: Overview/Essential			
Stakeholders and Interests:					
<p>Students- Indirectly benefit by having reports that guide improvements to engagement opportunities and platform features.</p> <p>CSI Directors- Receive periodic summaries to monitor engagement trends and student participation.</p> <p>Career Services Directors- Occasionally work with Talent-Link to receive summaries to assess how platform activity supports skill development and career readiness outcomes.</p>					
Brief Description: This use case enables the system to automatically compile and generate performance and engagement reports, allowing the university to make timely data-driven decisions without needing to constantly manually view analytics.					
Trigger: Automatically at the end of each month.					
Type: Temporal					
Relationships:					
<p>Association: System Clock, CSI Director</p> <p>Include: N/A</p> <p>Extend: N/A</p> <p>Generalization: N/A</p>					
Normal Flow of Events:					
<ol style="list-style-type: none"> <li>1. The system gathers and processes analytics data.</li> <li>2. System formats data into a report layout.</li> <li>3. Report is generated and stored.</li> <li>4. System notifies the recipients that the report is ready.</li> <li>5. Recipient reviews the report.</li> </ol>					
SubFlows:					
Alternate/Exceptional Flows:					

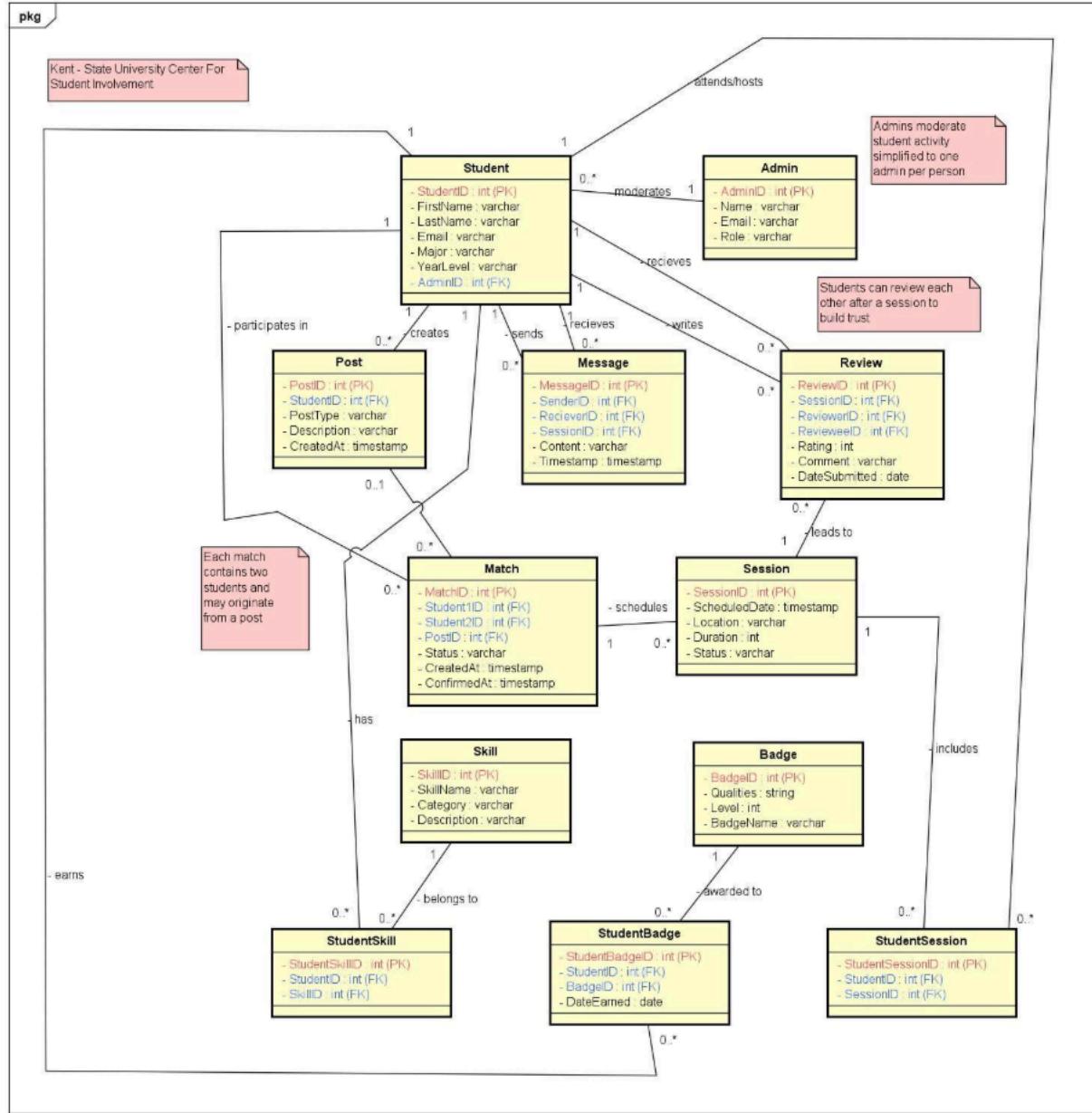
Use Case Name: Suggest Pairs		ID: 11	Importance Level: High		
Primary Actor: AI Algorithm	Use Case Type: Overview/Essential				
Stakeholders and Interests:					
<p>Students- Need an efficient way to find peers to exchange skills and collaborate.</p> <p>CSI Directors- Interested in seeing students actively matched and collaborating to inform engagement strategies.</p> <p>Career Services Directors- Want students paired effectively to support skill development and career readiness.</p>					
Brief Description: This use case enables the AI algorithm to automatically suggest student pairs for skill-sharing based on profiles, interests, and availability in order to improve match efficiency and collaboration opportunities.					
Trigger: When a student submits a new skill request post or add skills to their profile.					
Type: External					
Relationships:					
<p>Association: AI algorithm</p> <p>Include: N/A</p> <p>Extend: N/A</p> <p>Generalization: N/A</p>					
Normal Flow of Events:					
<ol style="list-style-type: none"> <li>1. AI algorithm retrieves student profiles and skills.</li> <li>2. AI algorithm evaluates compatibility and generates suggested pairings.</li> <li>3. Suggested pairs are sent to students as notifications for approval.</li> <li>4. Students review suggestions and approve or decline matches.</li> <li>5. Approved matches are added to students' connections lists.</li> </ol>					
SubFlows:					
Alternate/Exceptional Flows:					

## Activity Diagram



This activity diagram shows how the Talent-Link system connects students, administrators, a reporting system, university stakeholders, and the AI algorithm in one continuous process. Students begin by managing their profiles and making posts about their skills or interests, while the AI algorithm suggests potential peer matches. Once matched, students can send messages to each other and decide whether or not they want to schedule a session. If they do, the system tracks it, and after it's completed, they leave peer reviews to provide feedback. Administrators oversee platform activity and view analytics, which feed into the reporting system to generate reports. University stakeholders then receive these reports and collaborate with organizations to improve engagement opportunities. The process ends when collaboration and feedback close the loop between students and the university, completing the engagement cycle.

## Class Diagram



This diagram shows how Kent State's skill sharing platform connects students based on what they can offer and what they want to learn. Each student creates a profile that includes a list showing what skills they are offering or seeking. The system then uses the matchings and creates matches between students, which get scored and tracked. When students are matched, they can schedule sessions to connect or to meet up virtually. They use a built-in messaging system to coordinate. After each session they are able to leave reviews. Students earn badges for active participation which are tracked separately. They can submit feedback to help improve the platform. Admin monitor activity and content to ensure safety. This helps to keep everything organized and secure.

## CRUD Matrix

	Student	Admin	Post	Message	Review	Session	Match	Skill	StudentSkill	StudentBadge	StudentSession	Badge
1. Manage Profile	CRUD	R						CRUD	CRUD	R		R
2. Make a Post	R		CRUD									
3. Match With Peer	R						CRUD	R				
4. Send Message	R			CRUD								
5. Schedule Session	R					CRUD	R				CRUD	
6. View Sessions	R					R	R			CRUD	R	CRUD
7. Leave Peer Review	R				CRUD	R						
8. Manage Platform Activity		CRUD	R	R	R	R	R	R	R	R	R	R
9. View Analytics		R	R	R	R	R	R	R	R	R	R	R
10. Generate Student Activity		R	R	R	R	R	R	R	R	R	R	R
11. Suggest Pairs	R		R				CRUD	R	R	R		

## Appendix of Team Member Contributions

<b>Team Member</b>	<b>Percentage of Overall Work</b>	<b>Contributions</b>
Grace Karpinski	20%	<ul style="list-style-type: none"> <li>- Researched Class Diagrams on YouTube and figured out how to build the one for our team</li> <li>- Built different cardinalities for class diagram</li> <li>- Built the class diagram for our presentation and finalized it</li> <li>- Overlooked each slide</li> </ul>
Yusur Alrawi	20%	<ul style="list-style-type: none"> <li>- Set up &amp; finalized Google Slides for presentation</li> <li>- Drafted executive summary</li> <li>- Helped with use cases for UC diagram &amp; attributes for class diagram</li> <li>- Wrote UC descriptions 9-11</li> </ul>
Lucy Hennessy	20%	<ul style="list-style-type: none"> <li>- Wrote use case descriptions 7 &amp; 8</li> <li>- Helped finalize use cases and use case diagram</li> <li>- Created and finalized Activity Diagram</li> <li>- Helped finalize the project deliverable</li> </ul>
Akaiya Abdullah	20%	<ul style="list-style-type: none"> <li>- Created and finalized Use Case Diagram</li> <li>- Created and finalized CRUD Matrix</li> <li>- Helped with classes and relationships in Class Diagram</li> </ul>
Jordan Jenkins	20%	<ul style="list-style-type: none"> <li>- Helped finalize use cases and suggest modifications to diagram</li> <li>- Wrote use case descriptions 1-6.</li> <li>- Helped draft presentation slides and finalize project deliverable</li> </ul>

**(1) This deliverable required a high degree of coordination between team members to ensure that each UML component was in sync with the others. What collaboration approaches worked well for you in pursuing this goal, and why?**

(a) What worked well was dividing up responsibilities among team members while maintaining a shared review process to ensure consistency across all components. We discussed each UML component both in person and over text to stay aligned and exchange different perspectives that we had. This approach helped synchronize our progress and maintain open communication throughout this deliverable.

**(2) What collaboration approaches didn't work so well, and what adjustments would your team make if you were assigned a similar highly inter-related diagramming task in the future?**

(a) Our collaboration approaches worked effectively and we did not face any major challenges in this deliverable. The only adjustment we encountered was ensuring that updates made in the Use Case diagram were also reflected in the Use Case descriptions, but this was a simple and straightforward step.

- (3) How did your team ensure that all of its members had the knowledge and expertise necessary to speak with confidence during the team presentation? If things didn't go as smoothly as they should have, what proactive steps will you take to ensure things go better in Presentation 2?**
- (a) Each team member was assigned one slide to present, and the members who finalized the diagrams were responsible for presenting them since they were the most familiar with its details. In addition, all team members were aligned and familiar with all aspects of the project, which allowed everyone to speak confidently about their section.
- (4) Were there any extenuating circumstances that led to an uneven distribution of the workload? If so, how do you plan to compensate for this in the future?**
- (a) There were no extenuating circumstances that led to uneven work distribution. Our team did a better job of distributing work equally in this deliverable and we plan to continue using this approach moving forward to maintain efficiency.
- (5) Did you use any AI tools or other resources to generate or proofread any part of your final draft? If so, explain here (e.g., tell me what software/resources you used, & precisely how they were used)**
- (a) No AI tools were used in this deliverable.