

# *THE DATA MINE: MENTOR PALOOZA & ORIENTATION*

May 24, 2023

# **OUTCOMES**

- **Understand your role** as Corporate Partner Mentor and how it fits into the greater scope of the project and Data Mine Team
- Explore strategies to **build community** within your project student teams
- Reflect on **your strengths** and discover **ways to incorporate them** in The Data Mine student experience
- **Define the value** this investment brings to your organization
- Provide a **path for next steps** – summer planning

# WHO IS THE DATA MINE?



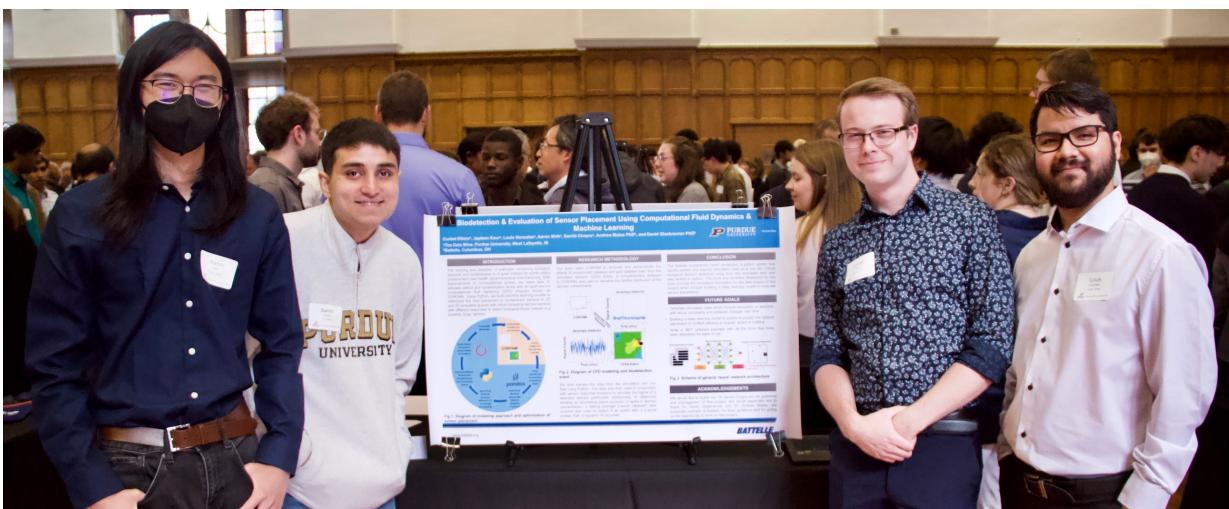
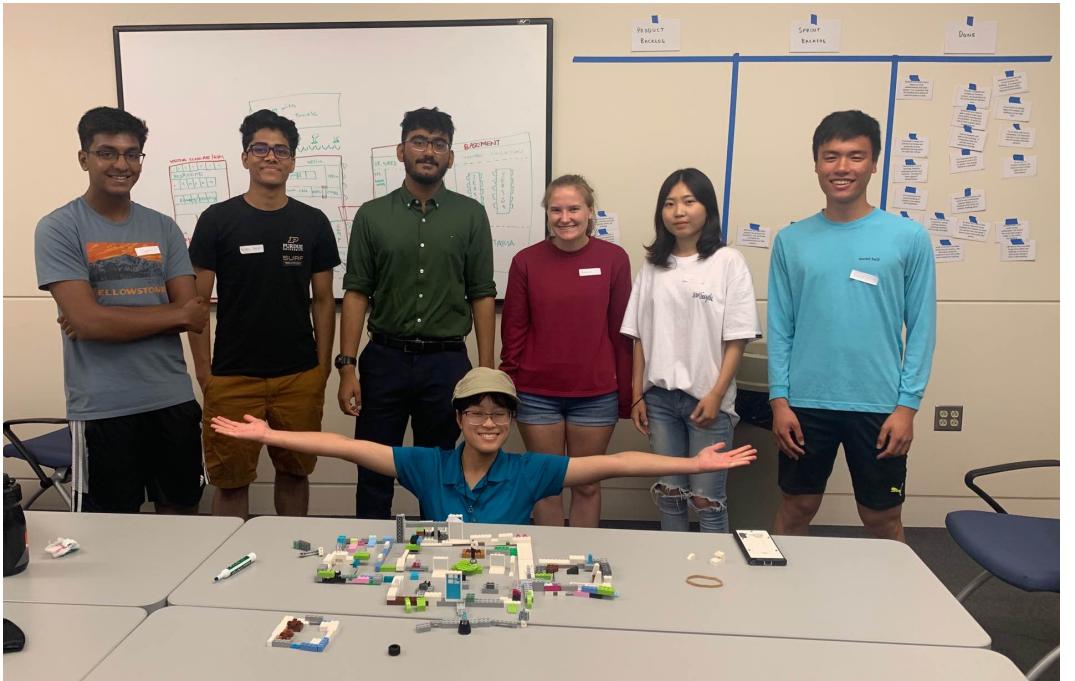
## Functional Teams:

- Corporate Partners | Data Science | Academic Programs & Outreach | Operations

## Corporate Partner Team:

- Cai, Emily, Lauren, Nick, and Nicholas

# ***MISSION: Data Science for ALL***



# **LEARNING OUTCOMES FOR STUDENTS**

1. Discover and **apply data science tools** to manage data sets from Corporate Partners through researching, cleaning, processing, analyzing, and visualizing data.
2. **Apply Agile project management methodology** to plan task ownership and decision making, collaborate with scrum teams to accomplish the increment during 2-week sprints, review the product backlog, and reflect on areas of success and improvement.
3. **Engage with peers** to identify and overcome complex challenges in the data sciences.
4. **Effectively communicate** findings of technical research through detailed documentation and team presentations.
5. Discover **professional development** opportunities in order to prepare for your career.

# ***REAL TALK - what does this look like in practice?***

## **How can you support these learning objectives?**

- Commit to **actively participating** in weekly meetings with student groups
- Get to know **students individually** – their strengths and aspirations
- Work closely with your TA
- **Celebrate** progress
- Stay open to possibilities and **encourage students to fail fast**

## **As a mentor, think about how you can...**

- Foster a sense of belonging
- Promote team building
- Provide a space of psychological safety



# ***MINI-CASE STUDY - Case #1***

## **Break out activity**

- Small group discussion in groups of 4
- Introduce yourselves, read case scenario – together or individually
- Find your groups' tab along the bottom that correlates with your breakout room and discuss the reflection questions
- Record response as you go – allows us to monitor your progress
- Google Sheets link will be shared with you in the chat.
- Open the chat and find the link, click it.



# *Case #1 Debrief*

## QUESTIONS...

- 1. During weekly meetings, you observe that some team members appear less engaged and contribute less actively. What questions might you ask to explore potential challenges the students are facing?**
  
- 2. How would you maintain an open line of communication with the students to foster a supportive environment?**
  
- 3. What would you do to encourage active participation and ensure that each team member feels valued and heard?**
  
- 4. What ideas do you have for this scenario to provide specific feedback that is clear and actionable?**
  
- 5. What strategies would you use to encourage the students to act upon your feedback and demonstrate their ability to learn and adapt?**

# Tips

## Supportive environment

- Spend time doing this EARLY – pays dividends.
- TA can help engage students – they may know more about what's going on (exams, feeling overwhelmed). Regularly communication.
- Keep chatting with students outside of weekly meetings
- Each student speaks during the meeting (fostering teamwork and accountability) and go around the horn
- Action items that align with student skill sets
- Diverse group – dive into their interests

## Providing clear feedback

- Provide potential next steps – trouble shooting, templates, additional learning for students
- Require cameras during weekly meetings
- Teach them out to fish, not just giving them the fish
- Challenge your students – in the way of enhancing engagement

# *Tips*

## **Supportive environment**

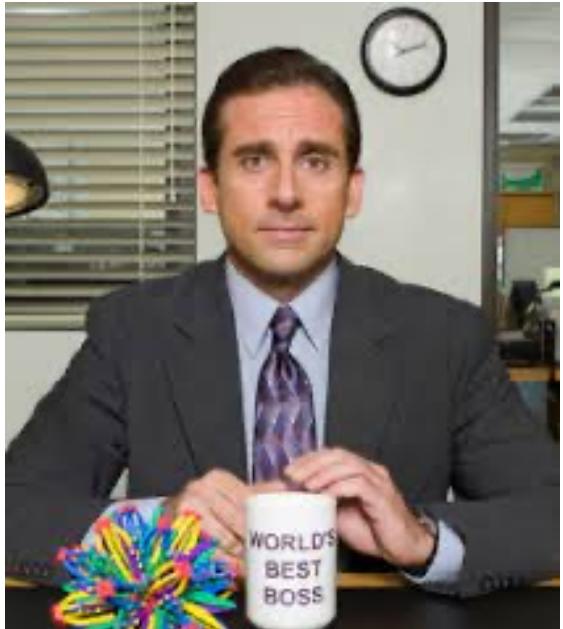
- Use of an ice breaker
- Active TA – engagement
- Communication outside of weekly meetings
- Engaging individually
- Recognizing different skill levels
- Challenging conversations when trust is built

## **Providing clear feedback**

- Clear follow up, keeping and sharing notes
- Time management in weekly meetings (balance updates with feedback)
- Project management system (Teams Planner)
- Group goals... PROJECT CHARTER

# *Supporting the mission: Data Science for ALL*

This is a **safe** place to grow skills and knowledge in data science.



Michael Scott

- Unaware of social norms
- No clear goals or direction
- All fun, no work



Mr. Burns

- Selfish and greedy
- Contempt for employees
- Driver without sharing a broader vision



Ted Lasso

- Compassionate
- Optimistic
- Coaches with positivity
- Meets players where they are



Dr. Mark Daniel Ward

- Gracious & welcoming
- 'I work for you' mentality
- Wakes up at 3am, turns into a pumpkin<sup>11</sup> at 8pm

# ***ENOUGH ABOUT US - LET'S TALK ABOUT YOU***

## **WHAT IS THE ROLE OF THE CORPORATE PARTNER MENTOR?**

- Provide technical and domain knowledge support
- Be consistent & be present throughout academic year
- Student focus: approachable, supportive and responsive
- Encourage an agile, adaptive working environment with a team with a mix of technical skills

## **WHAT IS NOT THE ROLE OF THE CORPORATE PARTNER MENTOR?**

- Do the work of the project
- Give the students a step-by-step guide to do the project
- Teach them EVERYTHING. We have technical resources to offer students in data science
- Disciplining students, leave academic integrity to us

## **MINI-CASE STUDY - Case #2**

### **Break out activity**

- Small group discussion in groups of 4 (same as previous)
- Introduce yourselves (if there are new members joining), read case scenario – together or individual
- Find your groups' tab along the bottom that correlate with your breakout room and discuss the reflection questions
- Record response as you go – allows us to monitor your progress
- Google Sheets link will be shared with you in the chat.
- Open the chat and find the link, click it.



## *Case #2 Debrief*

### **QUESTIONS...**

- 1. How would you approach this situation to facilitate Sarah's learning while ensuring progress is not hindered?**
- 2. What strategies would you employ to guide her in exploring different design methodologies and encourage her active problem-solving?**
- 3. How would you facilitate the process of identifying bottlenecks and guide Alex in making independent decisions through experimentation and problem-solving?**
- 4. How would you ensure the students remain actively engaged in the learning process while maintaining momentum?**
- 5. How would you foster a sense of ownership, independence, and critical thinking while providing necessary guidance and support?**
- 6. How would you emphasize the importance of active learning and encourage them to take ownership of their work, while assuring them of your guidance and support throughout the process?**

# Tips

## Active Learning

- Feel empowered – asking leading questions. Let Sarah come up with ideas. Engage with TA, technical team, and get help to make things happen
- Active discourse with peers – foster productive discussions that team challenge team members.
- Propose simple solution that allows for expansion on the problem
- 1:1 meetings with students
- Leverage TAs to gain insights on team members
- Documentation for Every. Meeting. As a record of reference.
- Encourage students to break down larger problem into smaller pieces.
- Once we have determined Sarah is the only student who has encountered this barrier, then point her to specific resources, pair her within a subgroup to facilitate learning while maintaining momentum. Meet with the student one on one as well as encourage the TAs to meet with students who are struggling. Keep an open line of communications and provide necessary resources. Create small goals that are attainable and help the student get to the endpoint

# Tips

## Active Learning

- Establishing team goals – clarity on skills and aligning with roles
- Take larger problem and **break it down to smaller steps**
  - **Include more students if needed**
- Point students to resources
- Give students more context of the bigger problem
- Work with TA to get additional assistance
- Best practice sharing – key and interesting points students learn
  
- Don't be afraid of failure, progress not perfection
- Use The Data Mine team to address roadblocks
- Documentation – every meeting.
- Teaching students how to fish, instead of fishing for them.

## *VALUE FOR YOUR ORGANIZATION*

Define the value - why does your organization invest resources in  
The Data Mine?



- Who is willing to share their experience?

# *Corporate Partner Benefits*



## Talent access

- Working with interdisciplinary students for 9 months (compared to 10 weeks in summer)



## Companies build name recognition

- Competition with big tech companies



## Testing proof-of-concept projects

- See what innovative students can create before putting internal company resources on the effort



## Completing value add projects

- Projects that are known to add value but haven't made the priority list – stuck in the backlog

# *Start with the end in mind....*

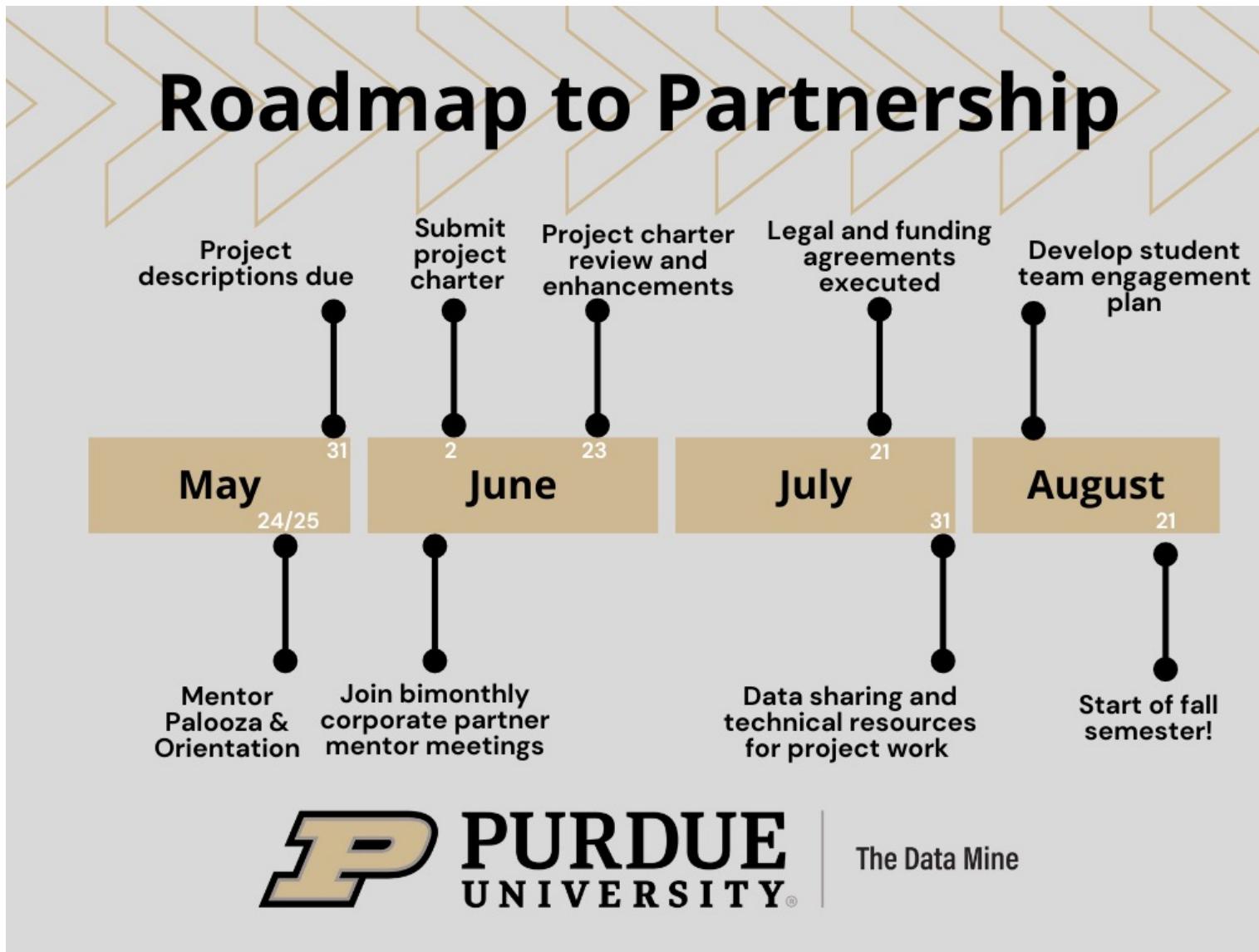
**What does a successful outcome look like?**

- For your student group?
- For you as mentor?
- For your organization?

Take out a pen and paper  
and write down your  
thoughts.



# *Next Steps - Summer Planning*



# Next Steps - Summer Planning

The Examples Book

Search book

## Corporate Partners

Introduction

▶ Students

▶ TAs

▼ Mentors

### ▼ Partner With Us

FAQs

Legal & Funding

Project Description  
Guidelines

Agile

Project Charter

Fall 2023 Logistics

▶ Mentoring Best Practices

▶ General Resources

▶ Technical Resources

▶ Agile and Scrum



Corporate Partners / Mentors / Partner With Us

## 2. Onboarding Checklist

*The following deadlines apply for summer 2023, but we are always actively looking for partnerships. Please reach out to discuss late deadlines or future partnership schedules.*

✓ **Project Descriptions** for academic year 2023-24 are required by May 15, 2023. Review [Project Description Guidelines](#) for instructions, requirements, and examples.

✓ **Summer Planning Meetings** for academic year 2023-24 are required to begin by May 31, 2023. Schedule meeting series with your Data Mine contact using our [Calendly Home Page](#).

✓ **Project Charters** for academic year 2023-24 are required by June 2, 2023. Review [Project Charter Guidelines](#) for instructions, requirements, and examples.

✓ **Sponsorship Acknowledgments, Addendums, NDAs, and IP Agreements** for academic year 2023-24 are required by July 21st, 2023. Review [Legal and Funding](#) to download this year's sponsor acknowledgment and for sample NDA/IP Agreements.

✓ **Data Sharing** for academic year 2023-24 is required by July 31, 2023. Review [Technical Resources](#) for instructions on our three modes of sharing data: Purdue's Compute Resources (Anvil), Virtual Desktop, or sending Laptops.

✓ **Develop a Student Engagement Strategy** before term starts on August 21st, 2023. Review [Mentor Best](#)

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## *Short term - next 2 weeks*

### **Project Charter**

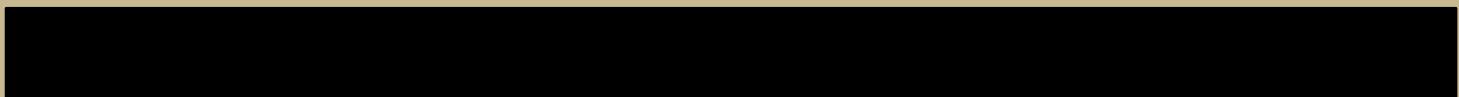
- Company overview
- Project Information
- Student Roles and Responsibilities
- Project Scope
- Technical Requirements
- Background and Preparation
- Documentation
- Data Security & Boundaries
- Implementation Plan

### **Access and log in to Gradescope**

- Training for mentors including...



LET'S



TALK

# THANK YOU