

**EE P 596**

# **ML Interviewing Master Class | DAY 1**

**Introduction | ML Breadth Tips | Mock Practice | Behavioral Round**



**Dr. Karthik Mohan, Apr 26 2025 | Spring Quarter course | PMP, ECE, UW**

# Bit about Me



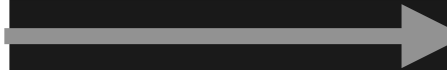
# Bit about Me

**Phd, ECE, UW**



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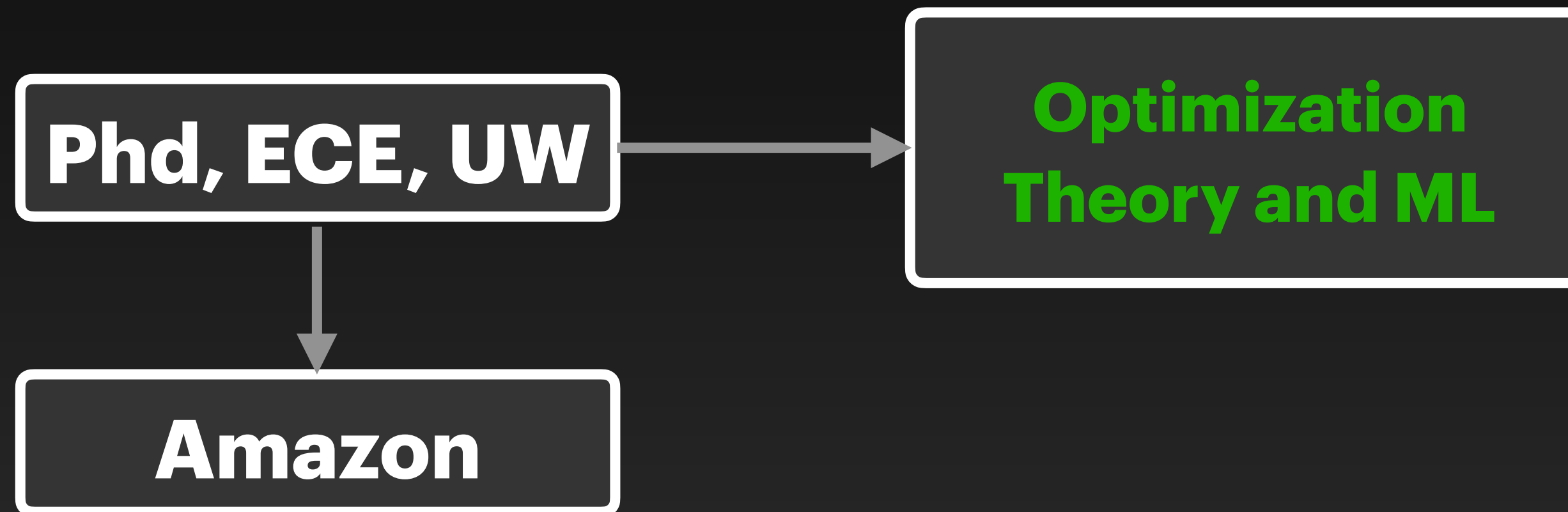
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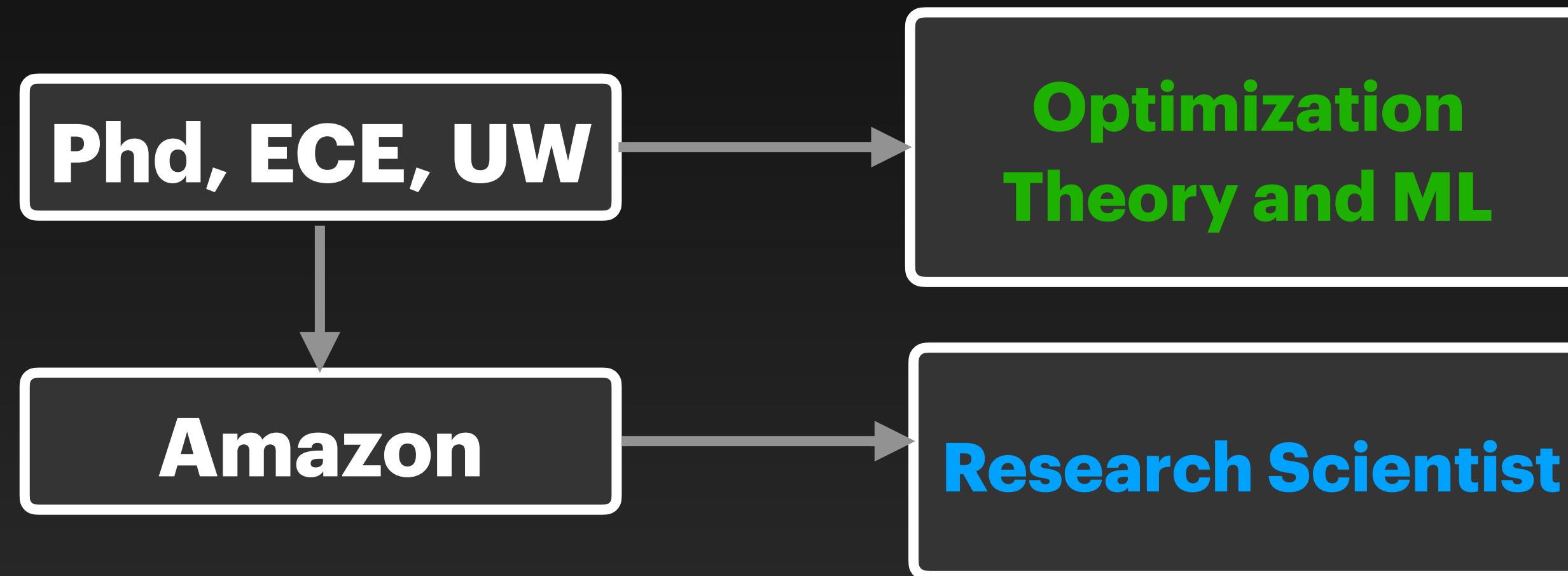
**Optimization  
Theory and ML**



# Bit about Me

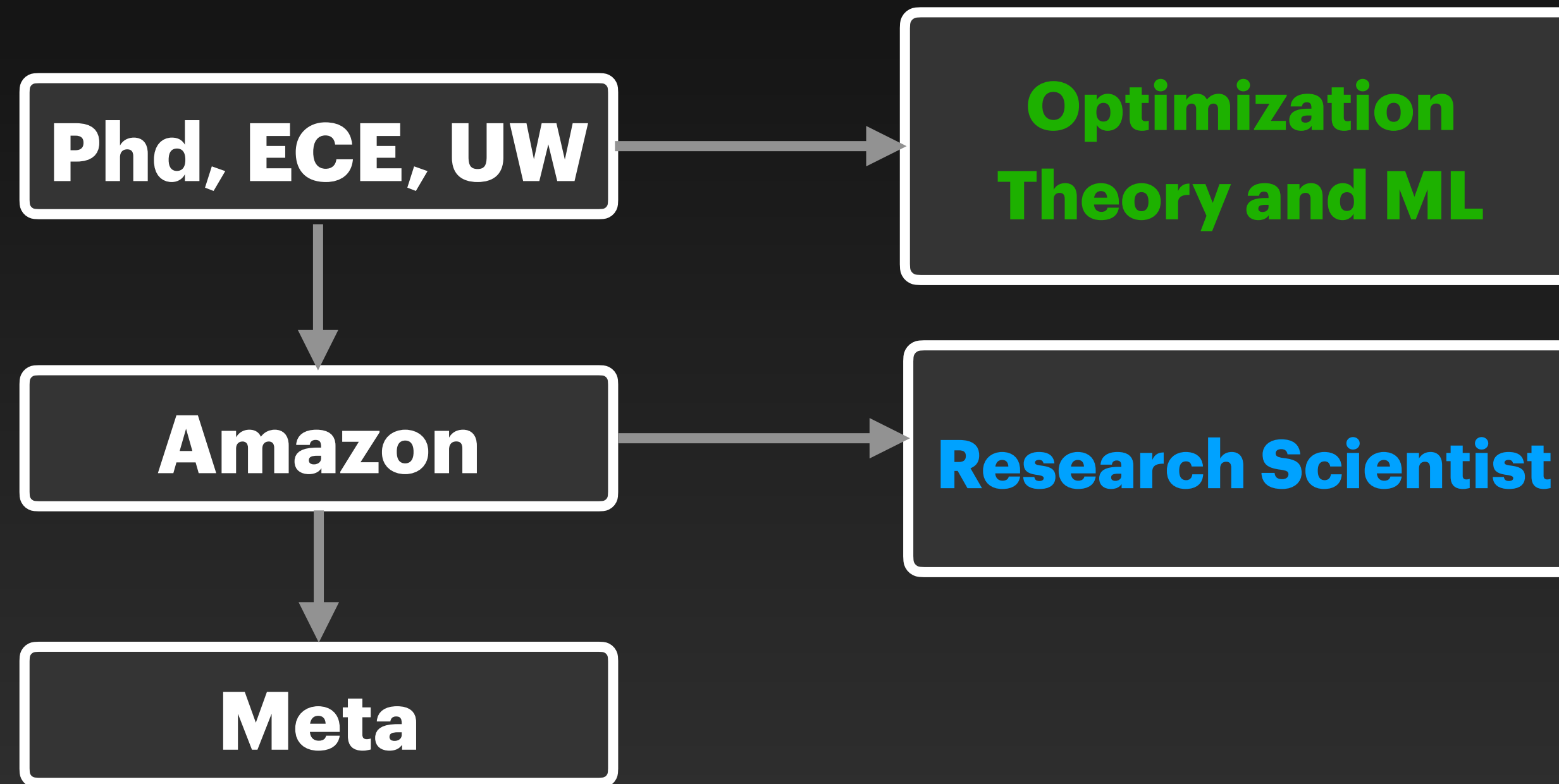


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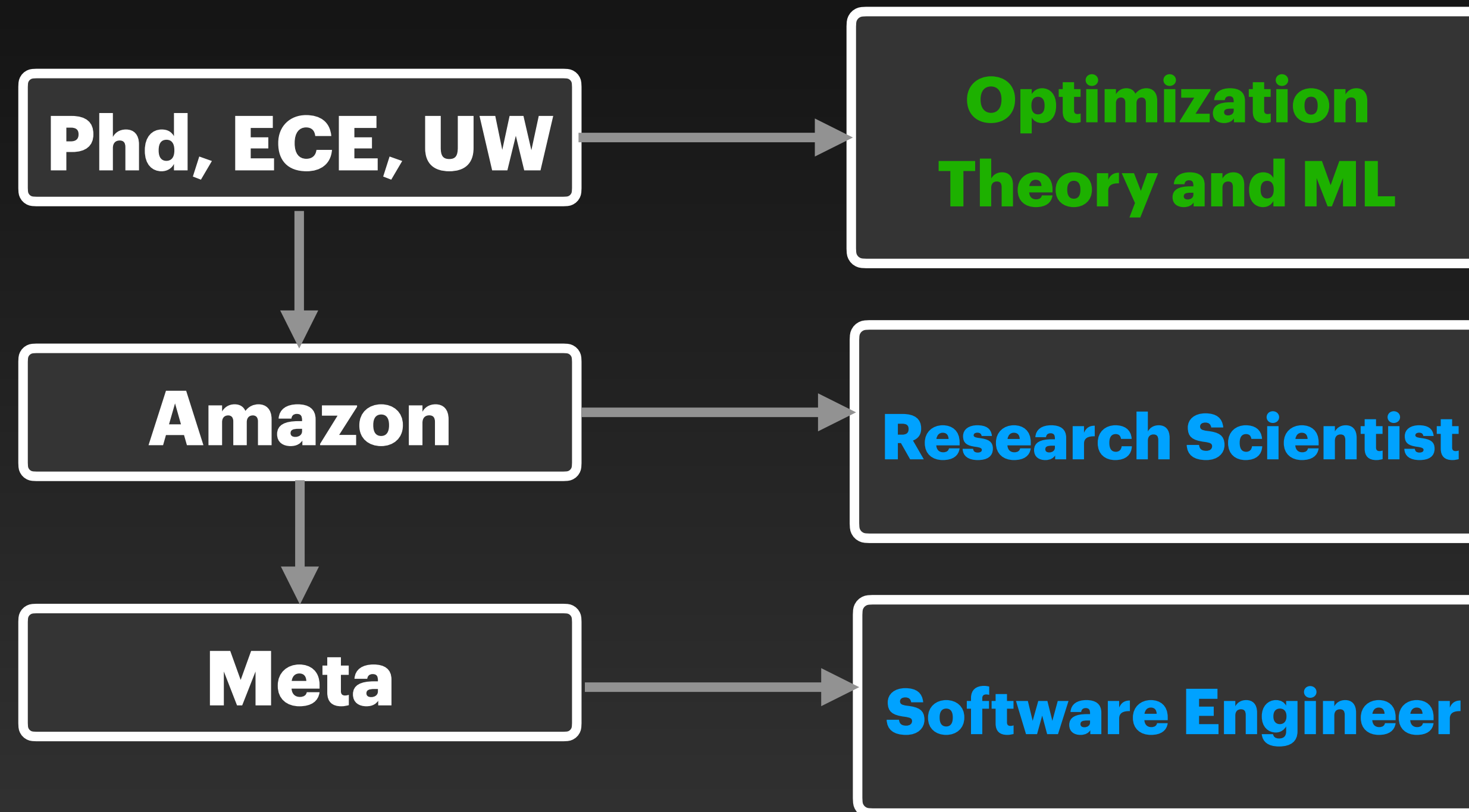




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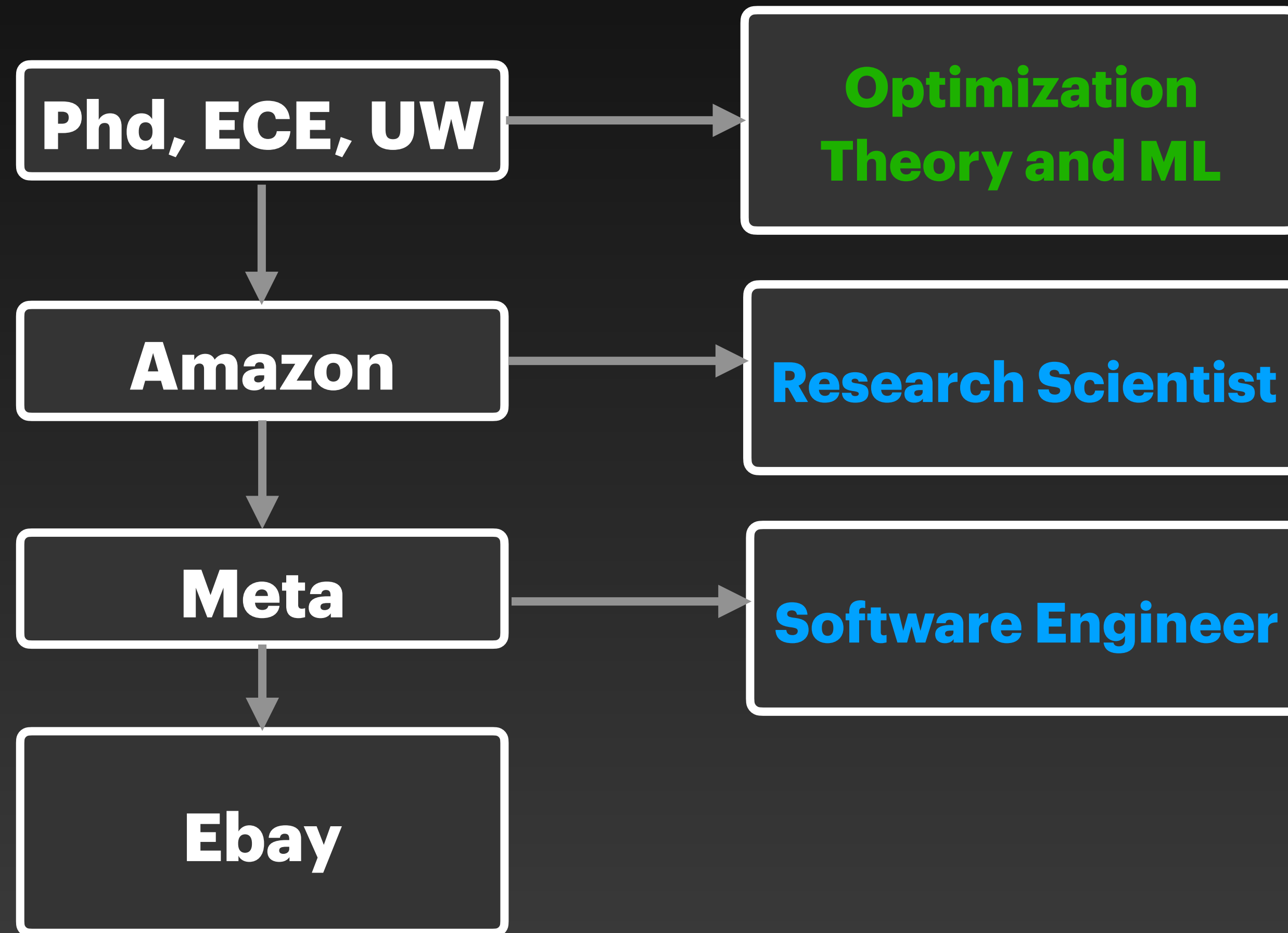


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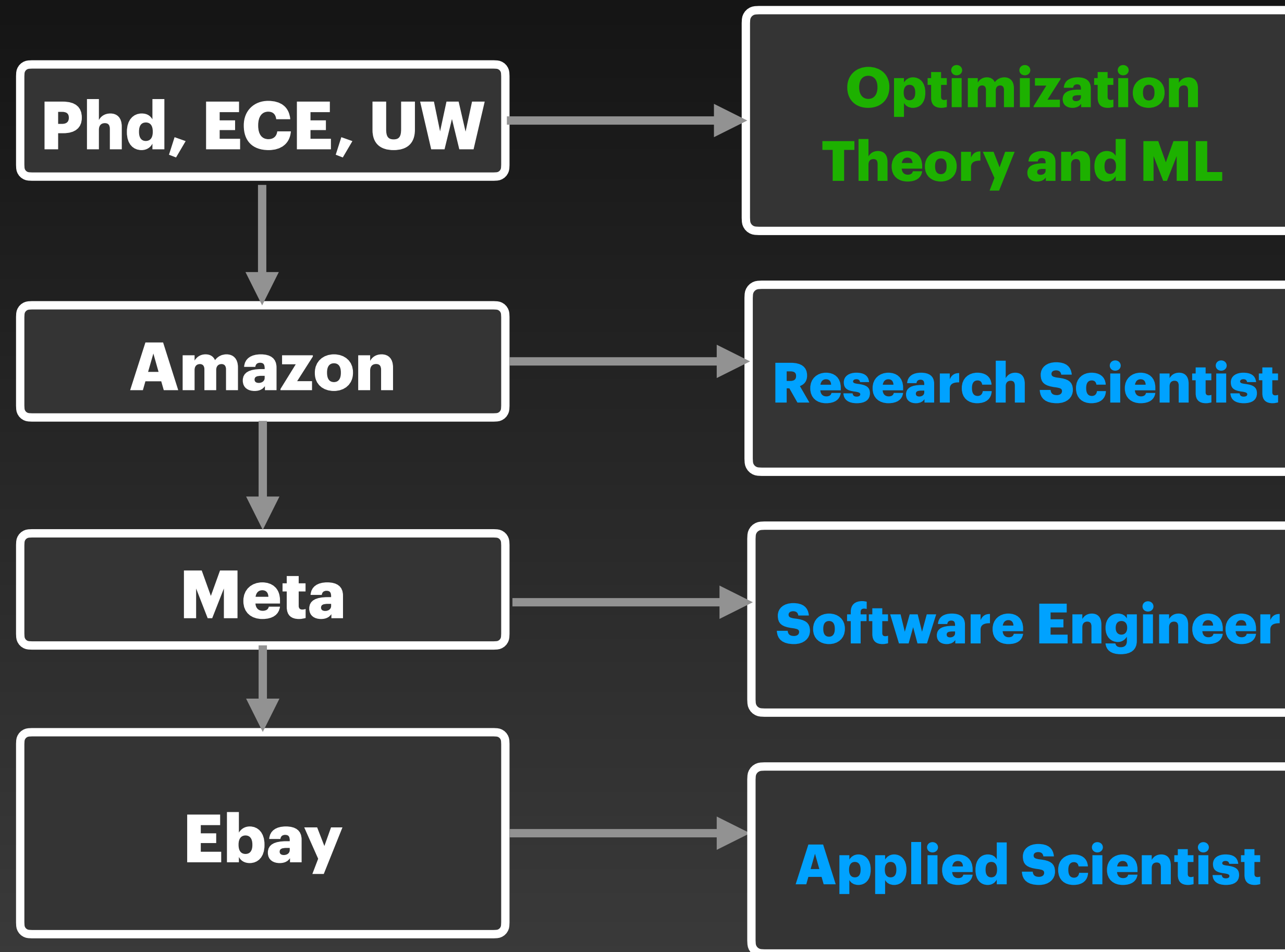




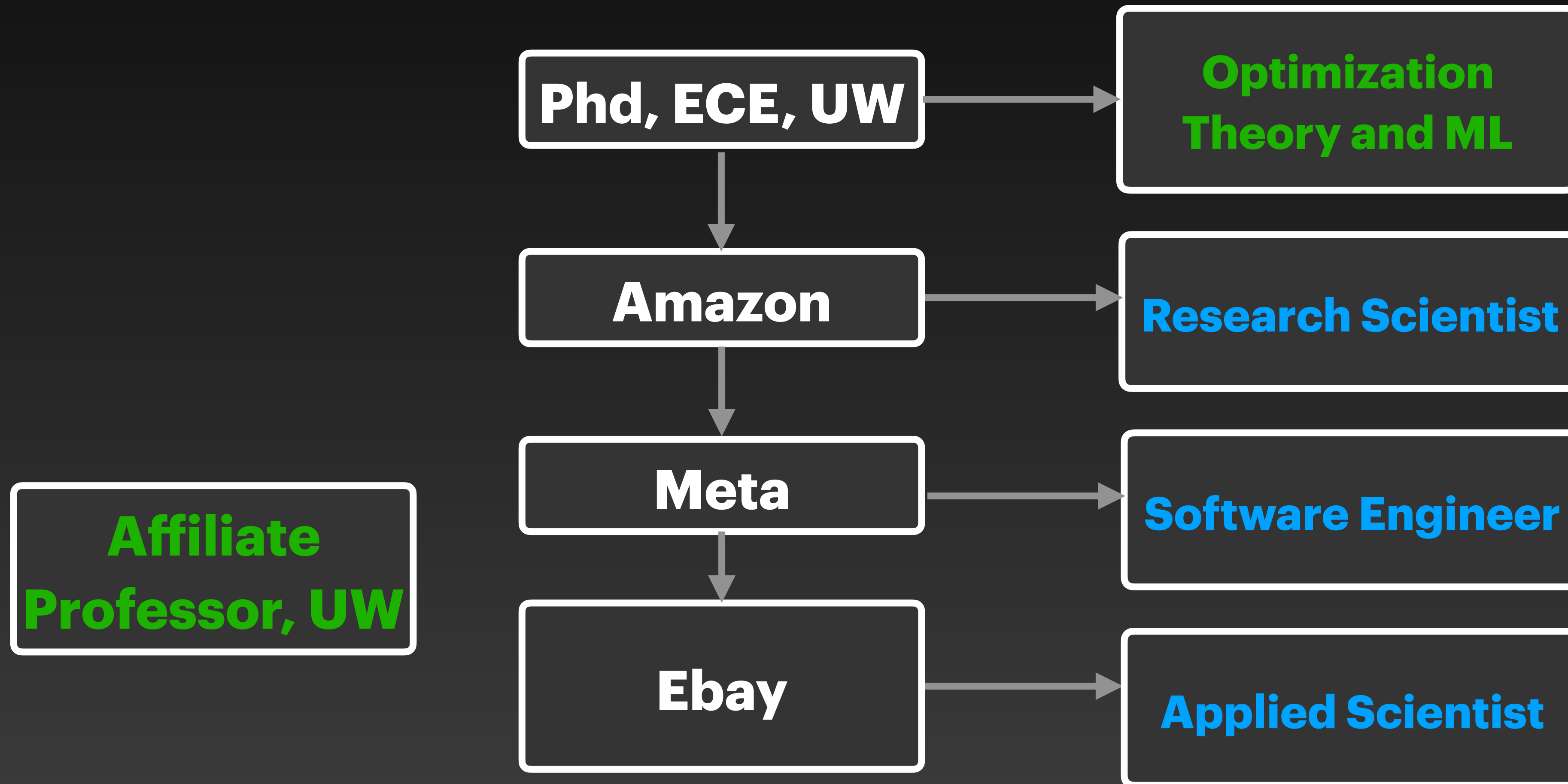
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# Introductions

**Lets do some introductions. Go around and share a bit about yourself and your background**

# Survey Results

**Let's take a look!**

# This Course!

**First time offering. Pilot. Will be a collaborative effort!**



# On Interviewing Process

**Can be chaotic!  
Its a game of persistence,  
Also one of resilience,  
And one of learning.  
There is luck and chance,  
But there is also a method to the madness.  
It can't be faked,  
You have to have the technical chops,  
And yet the prepared one succeeds**

# On Interviewing Process

**This one used HI (human intelligence)  
:-)**

**Can be chaotic!  
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And one of learning.  
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But there is also a method to the madness.  
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# Personal Story Time

# Types of AI/ML Roles

**ML Engineer**

# Types of AI/ML Roles

**ML Engineer**

**Applied Scientist**

# Types of AI/ML Roles

**ML Engineer**

**Applied Scientist**

**Data Scientist**



# Types of AI/ML Roles

**ML Engineer**

**Applied Scientist**

**Data Scientist**

**Research Scientist**

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**Data Scientist**

**Research Scientist**

**Data Analyst**

# Types of AI/ML Roles

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**Data Scientist**

**Research Scientist**

**Data Engineer**

**Data Analyst**

# Focus of this Course

**ML Engineer**

**Applied Scientist**

**Data Scientist**

**Research Scientist**

**Data Engineer**

**Data Analyst**

# ML Engineer/Applied Scientist Interview Types

**ML Breadth**

**ML Depth**

**ML Design**

**Coding**

**Behavioral Round**

**ML Coding**

# Structure of the Course

## Day 1: ML Breadth & Behavioral

- ML Breadth Intro
- Topics
- Mock Interview Session
- Q&A
- Practical Considerations

## Day 2: Coding

- Coding Intro
- Topics
- Guest Engineer Spotlight
- Mock Interview
- Q&A
- Practical Considerations

## Day 3: ML Depth

- ML Depth Intro
- Topics
- Guest ML Scientist Spotlight
- Mock Interview
- Q&A
- Practical Considerations

## Day 4: ML Design and Wrap up

- ML Design Principles
- Example Questions
- Mock Interview
- Q&A
- Practical Considerations



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# Credit for course

- 1. Fill out the survey**
- 2. Attend all lectures (in person)**
- 3. Simple take home assignment between two weekends**

# High-Level Pointers to Effective Interviewing

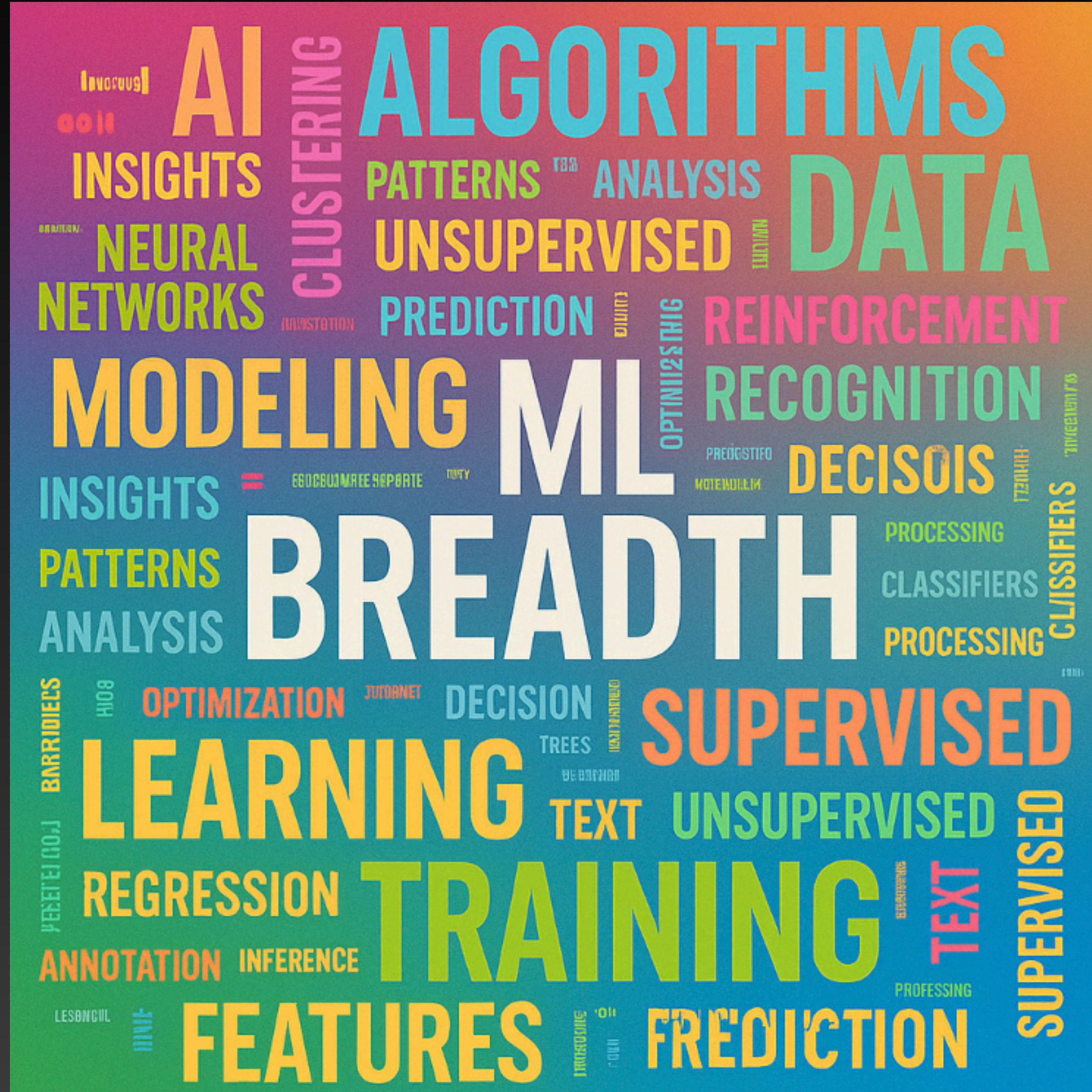
- 1. Keep your calm**
- 2. Map out your strengths and weaknesses**
- 3. Seek to learn - esp. with an interview that didn't go your way**
- 4. Add more data points through concrete projects to your resume**
- 5. Rinse and Repeat!**

# Group Exercise ( 10 minutes )

- 1. Sit in groups of 3**
- 2. Each person go around and share your strengths and areas of improvement esp. regarding ML interviewing and process**



# ML Breadth





# ML Breadth Overview

- 1. Typically covered in a Phone Screen (50 minutes)**
- 2. Goal is to assess your breadth of ML understanding**

# ML Breadth Overview

1. Typically covered in a Phone Screen (50 minutes)
2. Goal is to assess your breadth of ML understanding

1. **Knowing everything about Deep Learning but not knowing what overfitting is a red flag!**
2. **ML breadth seeks to assess that you not only have worked on some specific ML projects but have a broader and fundamental understanding of the space**

# ML Breadth Interview Structure (Typical)

- 1. Introductions/Resume Review**
- 2. Bunch of ML questions**
- 3. Optional Coding exercise**
- 4. End of interview questions from candidate**

# ML Breadth Topics

**Classical ML**

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**NLP**

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**ML Training**

# ML Breadth Topics

**Classical ML**

**NLP**

**LLMs**

**ML Training**



# ML Breadth Topics

**Classical ML**

**NLP**

**LLMs**

**ML Training**

**Evaluation Metrics**

# ML Breadth Topics

**Classical ML**

**NLP**

**LLMs**

**Data Transformations**

**ML Training**

**Evaluation Metrics**

# ML Breadth Topics

**Classical ML**

**NLP**

**LLMs**

**Data Transformations**

**ML Training**

**Evaluation Metrics**

**Vision**

# ML Breadth Topics

**Classical ML**

**NLP**

**LLMs**

**Data Transformations**

**Deep Learning**

**ML Training**

**Evaluation Metrics**

**Vision**

# Example questions from the web

1. Whats your favorite classifier (**Classical ML**)
2. Tell me if this scenario is an overfit or not  
(**Classical ML**)
3. How do you go about figuring out entities in a conversation between a buyer and a seller  
(**NLP**)
4. What LLMs are you aware of? (**LLM**)
5. What do you do if you have less data than needed for a ML task (**Data Transformations**)
6. Which is a better eval metric: precision or recall and why? (**Eval Metrics**)

# Pointers on ML Breadth

It's designed to cover a bunch of topics in a short amount of time. Doesn't have to go into depth on any topic. Interviewer may probe a bit on any topic - But may not go deep. Good to say, "I don't know" than say something you are not sure of!

# Let's do a mock ML breadth Interview (10 mins)

1. Sit in groups of 2
2. Introduce yourselves
3. Pick person A and person B in your group
4. Person A can set a timer for 5 minutes and ask 10 questions of Person B with approximately 30 seconds per question with a follow up or two if time permits
5. Repeat the same by Person B for next set of 10 questions
6. Each "interviewer" evaluates

# Let's do a mock ML breadth Interview (10 mins)

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## Evaluation Criteria

1. Clarity in response (scale of 1 to 5)
2. Being concise vs rambling (scale of 1 to 5)
3. Use of examples for easy understanding (scale of 1 to 5)
4. Keeping time (scale of 1 to 5)



# Let's do a mock ML breadth Interview (10 mins)

**5 minutes per person and feedback for 5 minutes**

1. Sit in groups of 2
2. Introduce yourselves
3. Pick person A and person B in your group
4. Person A can set a timer for 5 minutes and ask 10 questions of Person B with approximately 30 seconds per question with a follow up or two if time permits
5. Repeat the same by Person B for next set of 10 questions
6. Each "interviewer" evaluates

## Evaluation Criteria (Document on gdoc)

1. Clarity in response (scale of 1 to 5)
2. Being concise vs rambling (scale of 1 to 5)
3. Use of examples for easy understanding (scale of 1 to 5)

**Lets discuss learnings from mock interviewing!**



# Behavioral Interview



# Behavioral Round Overview

- 1. Typically covered on an onsite (60 minutes)**
- 2. Goal is to assess your ability to work in dynamic situations at work and with diverse group of colleagues**



# Behavioral Interview Structure (Typical)

- 1. Introductions/Resume Review**
- 2. Two or 3 behavioral questions**
- 3. Optional Coding exercise**
- 4. End of interview questions from candidate**

# Example questions from the web

1. Tell me about a time when you had a difficult situation with a colleague and how did you handle it?
2. How did you handle a project situation that didn't go as expected

# Pointers on Behavioral Round

Behavioral round assesses your ability to work with dynamic situations and people. How do you handle difficult situations? How do you navigate escalations? How do you handle ambiguity in projects?

# STAR Methodology

STAR

Situation

Task

Action

Result



# Prepping for behavioral round

## STAR

1. Look to your past experience - Both at school and work
2. Take each situation and apply the STAR method and more importantly, what did you learn. What could you have done better?
3. This is something to do ahead of time and document ahead of time

# Example

## STAR

1. **Situation:** Had to work with a fellow engineer where I had difficulty communication ideas and actions
2. **Task:** Figure out an amicable resolution
3. **Action:** Looped in manager for a better working relationship
4. **Result:** Led to better working dynamic and more professional interactions

# 15 minute exercise

## STAR

1. Open up a google doc and look back to your working experiences
2. What situations did you encounter that were challenging or puzzled you?
3. Apply the STAR method and document your responses

**You can't come up with responses on fly in an interview and it shows you are unprepared!**

# Behavioral Mock Interview (20 minutes)

1. Sit in groups of 2
2. Pick person A and person B in your group
3. Person A can set a timer for 10 minutes and ask two behavioral questions
4. Repeat the same by Person B for next set of 10 questions
5. Each “interviewer” evaluates

# Behavioral Mock Interview (20 minutes)

1. Sit in groups of 2
2. Pick person A and person B in your group
3. Person A can set a timer for 10 minutes and ask two behavioral questions
4. Repeat the same by Person B for next set of 10 questions
5. Each “interviewer” evaluates

## Example questions

1. Tell me about a time when you had a difficult situation with a colleague and how did you handle it?
2. How did you handle a project situation that didn't go as expected
3. Tell me about a failure you have faced at work and how did you handle it?

# Behavioral Mock Interview (20 minutes)

**Evaluate for clarity, good examples that fit the question, clear communication and body language (scale of 1-5)**

1. Sit in groups of 3
2. Pick person A, B and C in your group
3. Person A can set a timer for 10 minutes and ask two behavioral questions of B
4. Repeat the same by Person B and Person C for next set of 10 questions
5. Each “interviewer” and observer evaluates

## Example questions

1. Tell me about a time when you had a difficult situation with a colleague and how did you handle it?
2. How did you handle a project situation that didn't go as expected
3. Tell me about a failure you have faced at work and how did you handle it?

**Lets discuss learnings from mock interviewing!**

Q&A ?