EE P 596
ML Interviewing Master Class | DAY 1

Introduction | ML Breadth Tips | Mock Practice | Behavioral Round

Dr. Karthik Mohan, Nov 1 2025 | Fall Quarter course | PMP, ECE, UW

Bit about Me

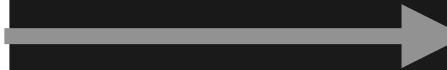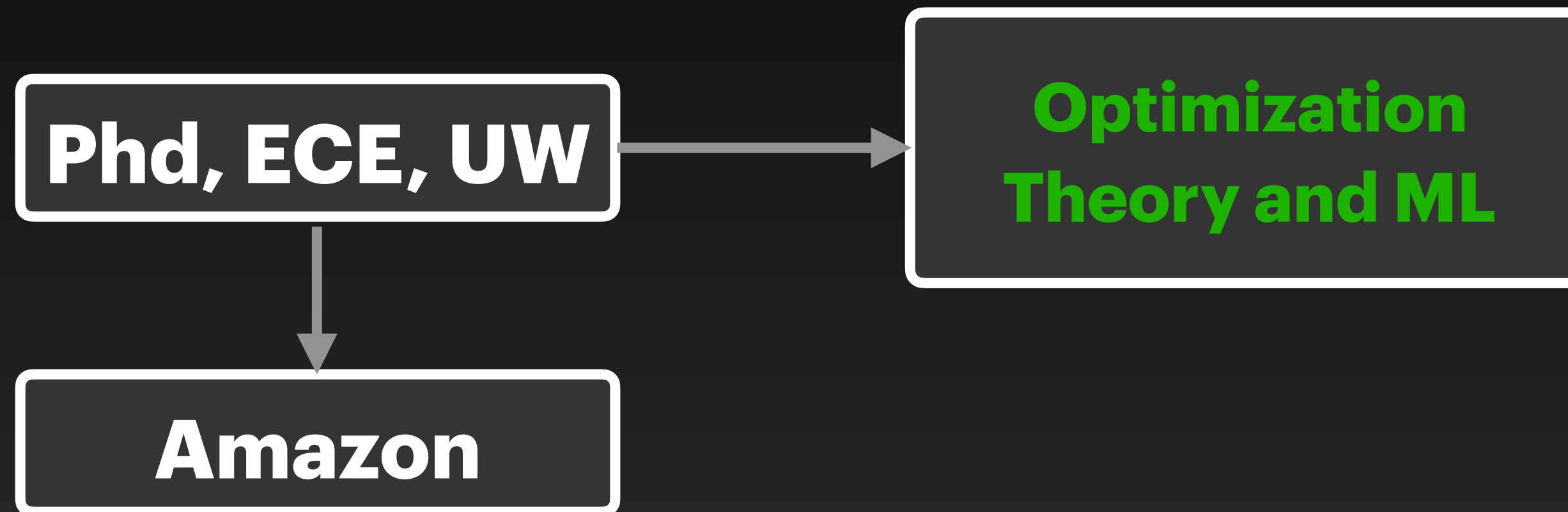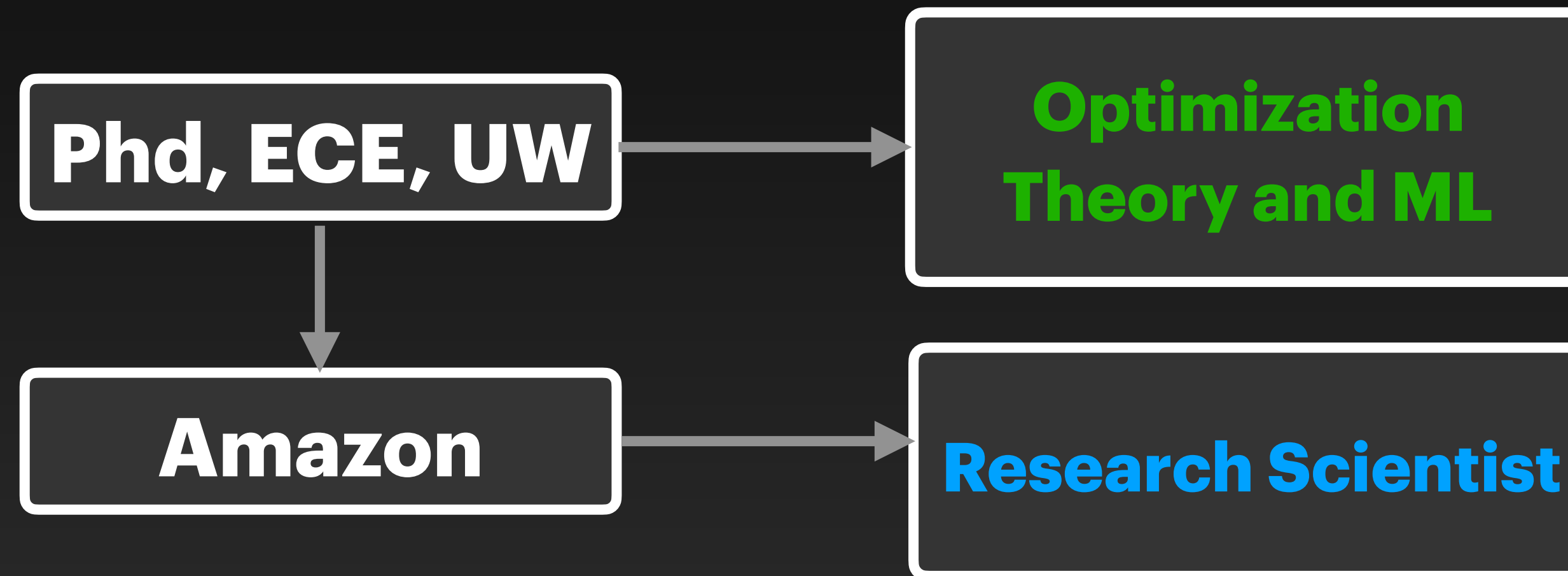# Bit about Me

Phd, ECE, UW

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Phd, ECE, UW → **Optimization Theory and ML**

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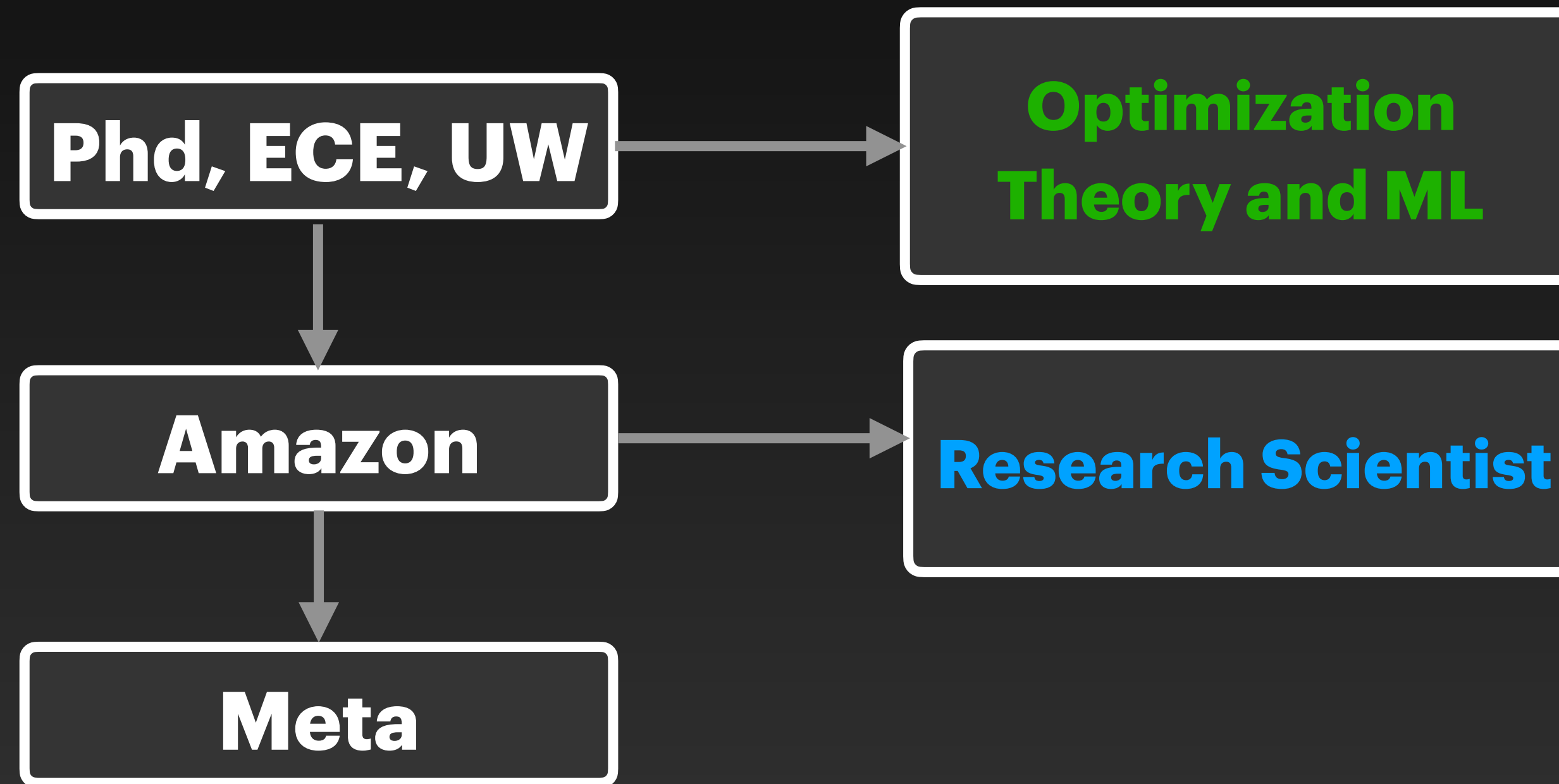
Amazon

Bit about Me

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Phd, ECE, UW  ──────▶  Optimization Theory and ML
     │
     ▼
  Amazon      ──────▶  Research Scientist
     │
     ▼
   Meta       ──────▶  Software Engineer
```

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Affiliate Professor, UW
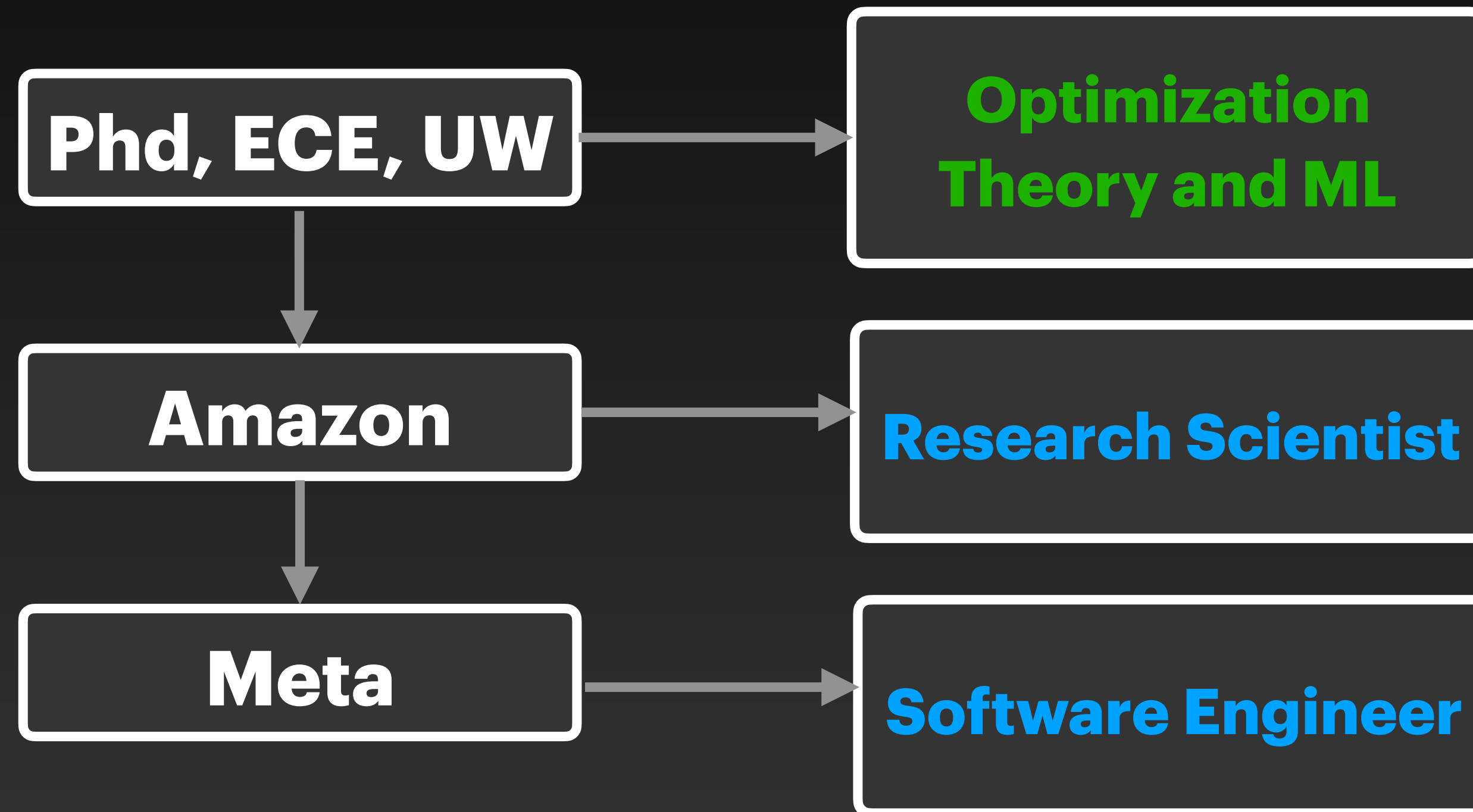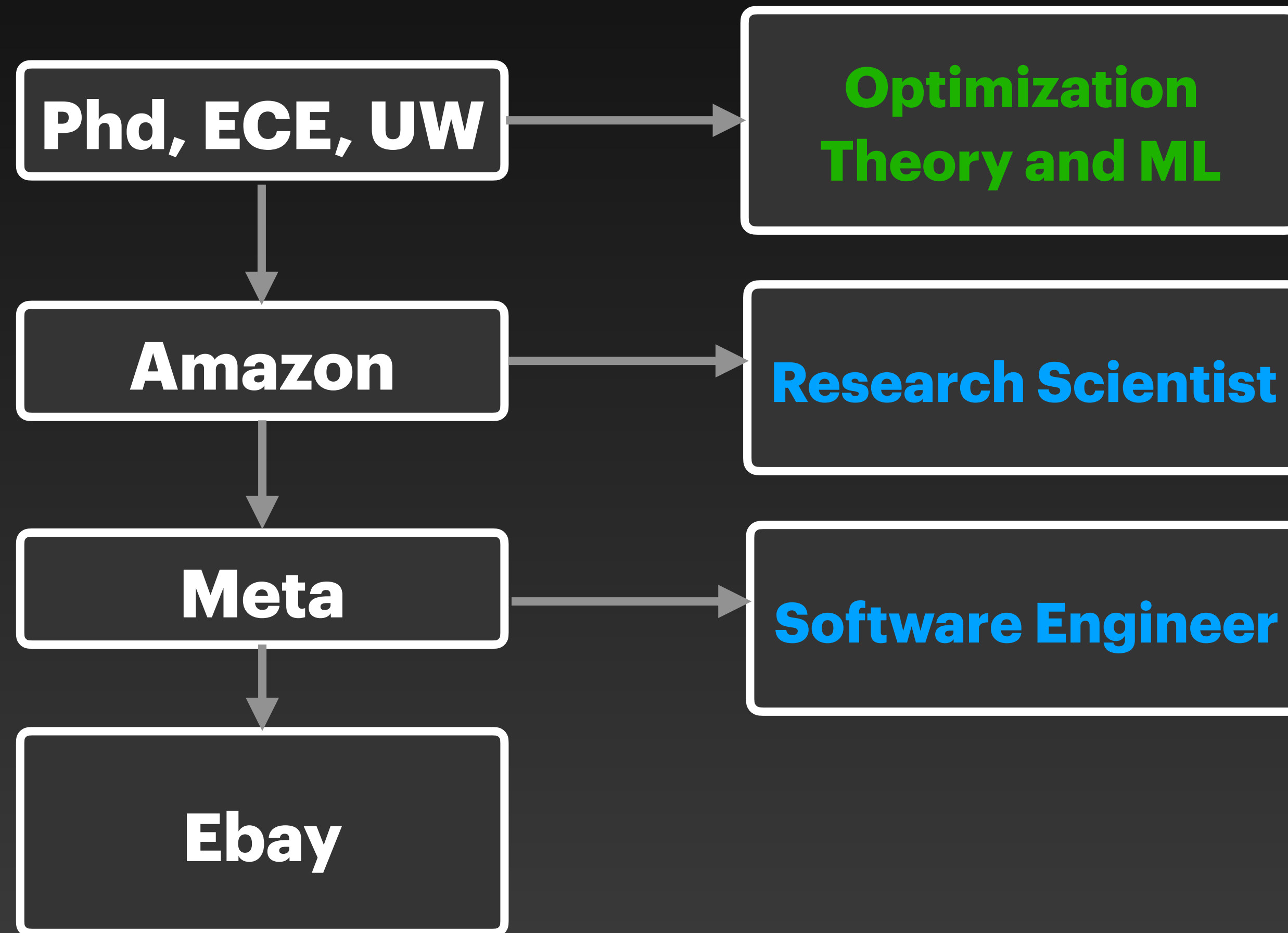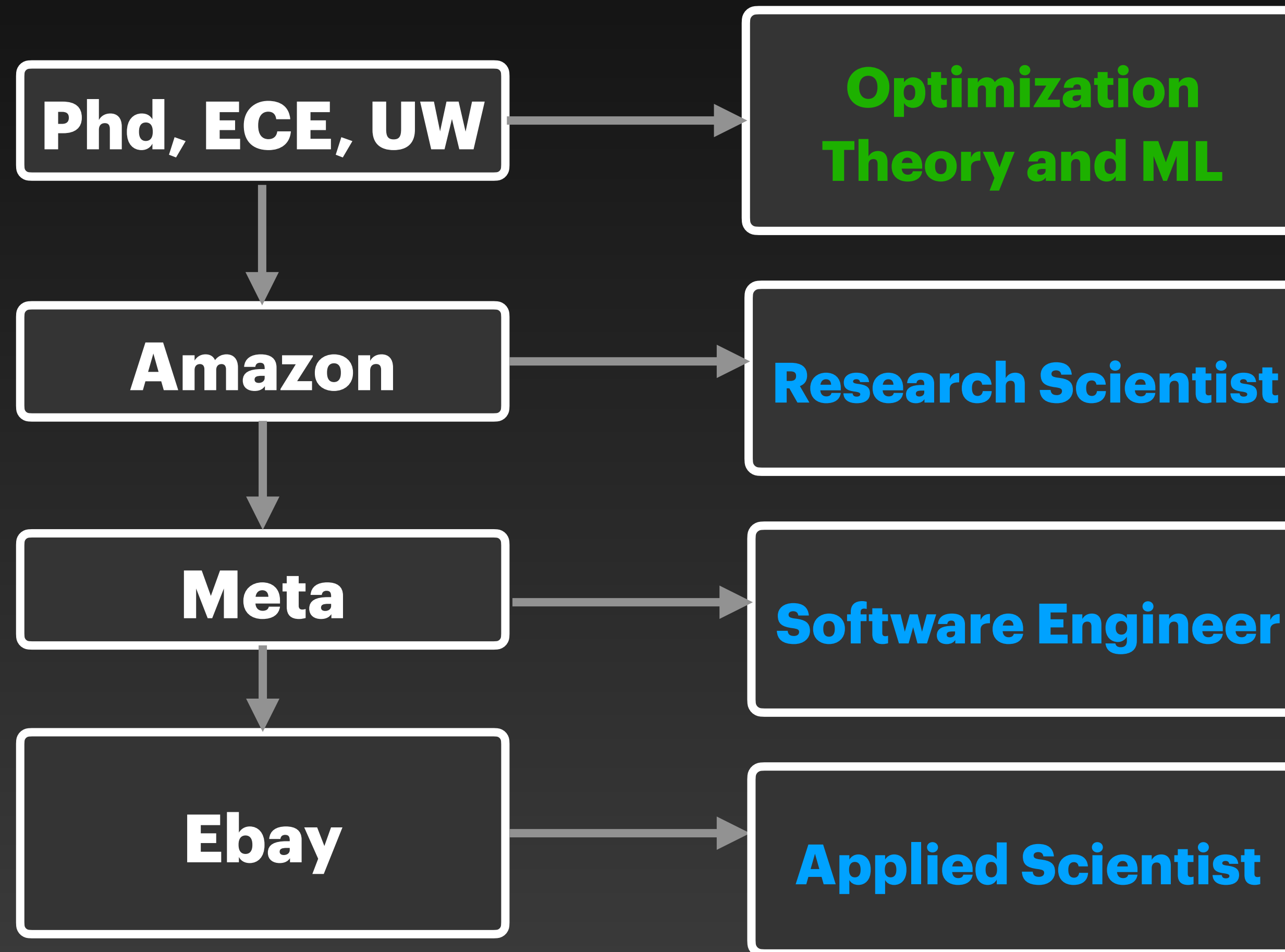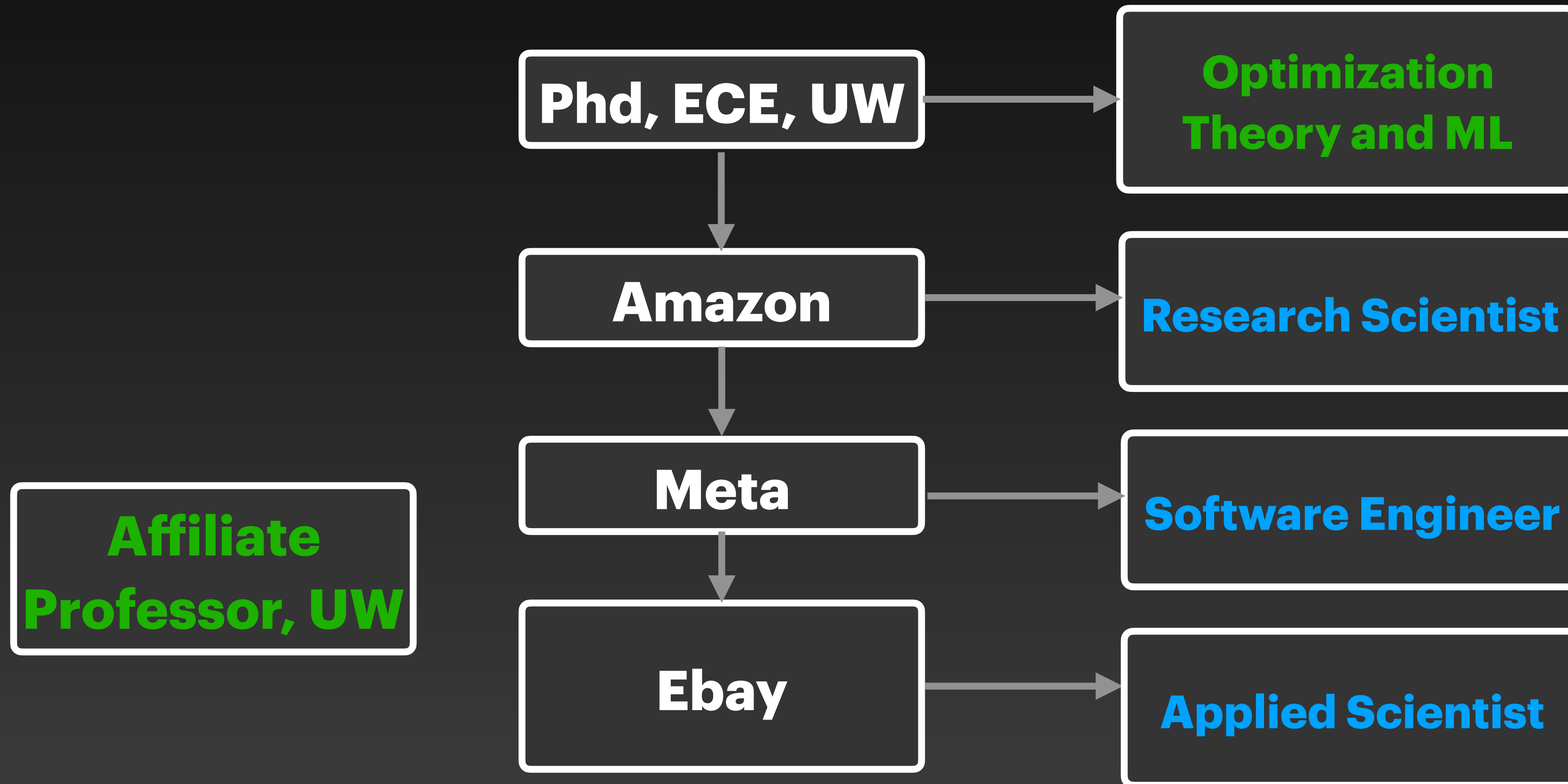
Introductions

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

Survey Results

Let's take a look!

This Course!

Second time offering. First one was in April 2025!

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

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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

Types of AI/ML Roles

ML Engineer

Applied Scientist

Data Scientist

Research Scientist

Data Analyst

Data Analyst

Types of AI/ML Roles

ML Engineer

Applied Scientist

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

Behavioral Round

ML Design

ML Coding

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
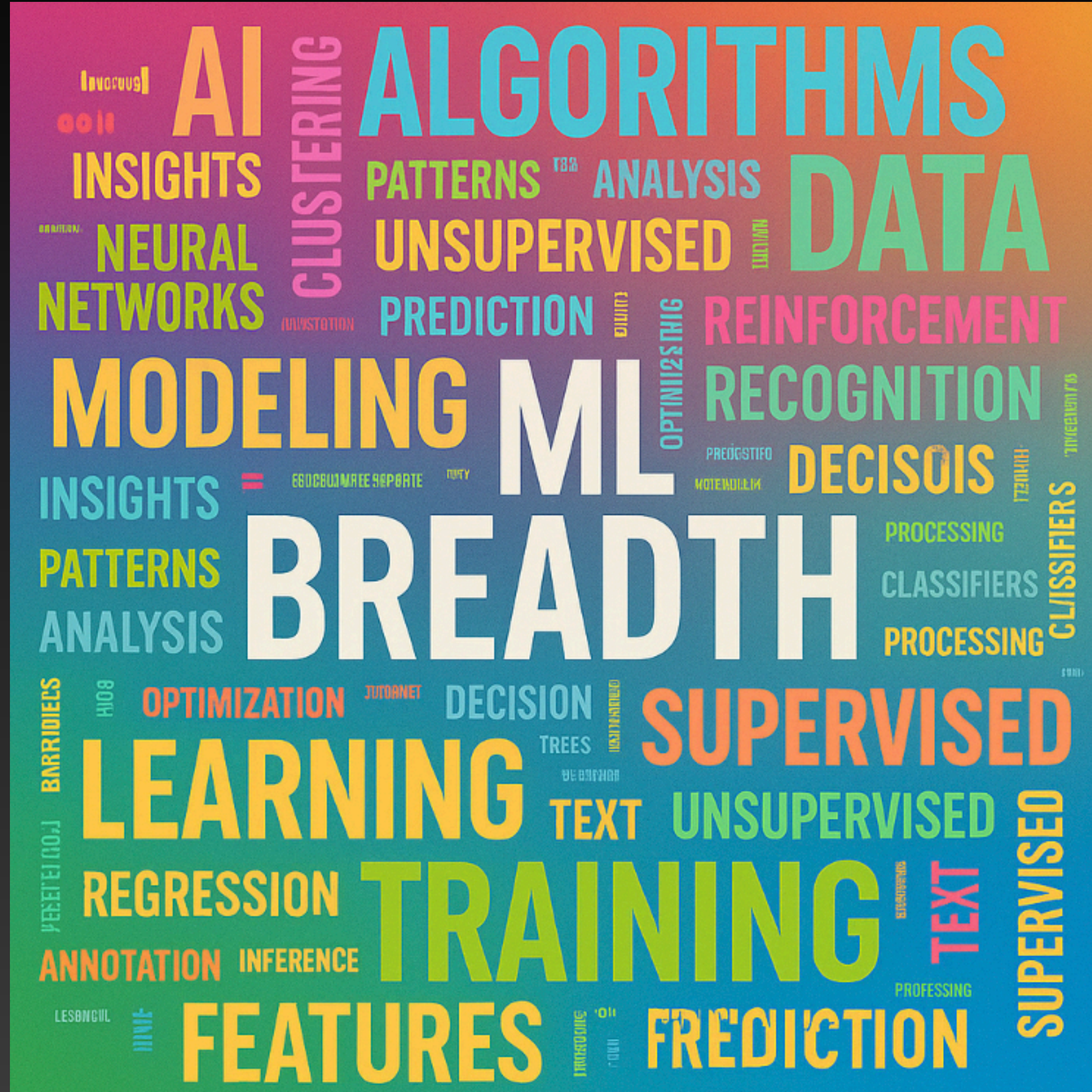
ML Breadth Overview

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

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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

ML Breadth Topics

Classical ML

NLP

ML Breadth Topics

Classical ML

NLP

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

ML Training

LLMs

Evaluation Metrics

Data Transformations

ML Breadth Topics

Classical ML

NLP

ML Training

LLMs

Evaluation Metrics

Data Transformations

Vision

ML Breadth Topics

Classical ML

NLP

ML Training

LLMs

Evaluation Metrics

Data Transformations

Vision

Deep Learning

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!

ML Breadth Topics - Let's list it out

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 ?