

[S23] Applied Machine Learning



Innopolis University
BEKKOUCH Imad Eddine Ibrahim

Self Introduction

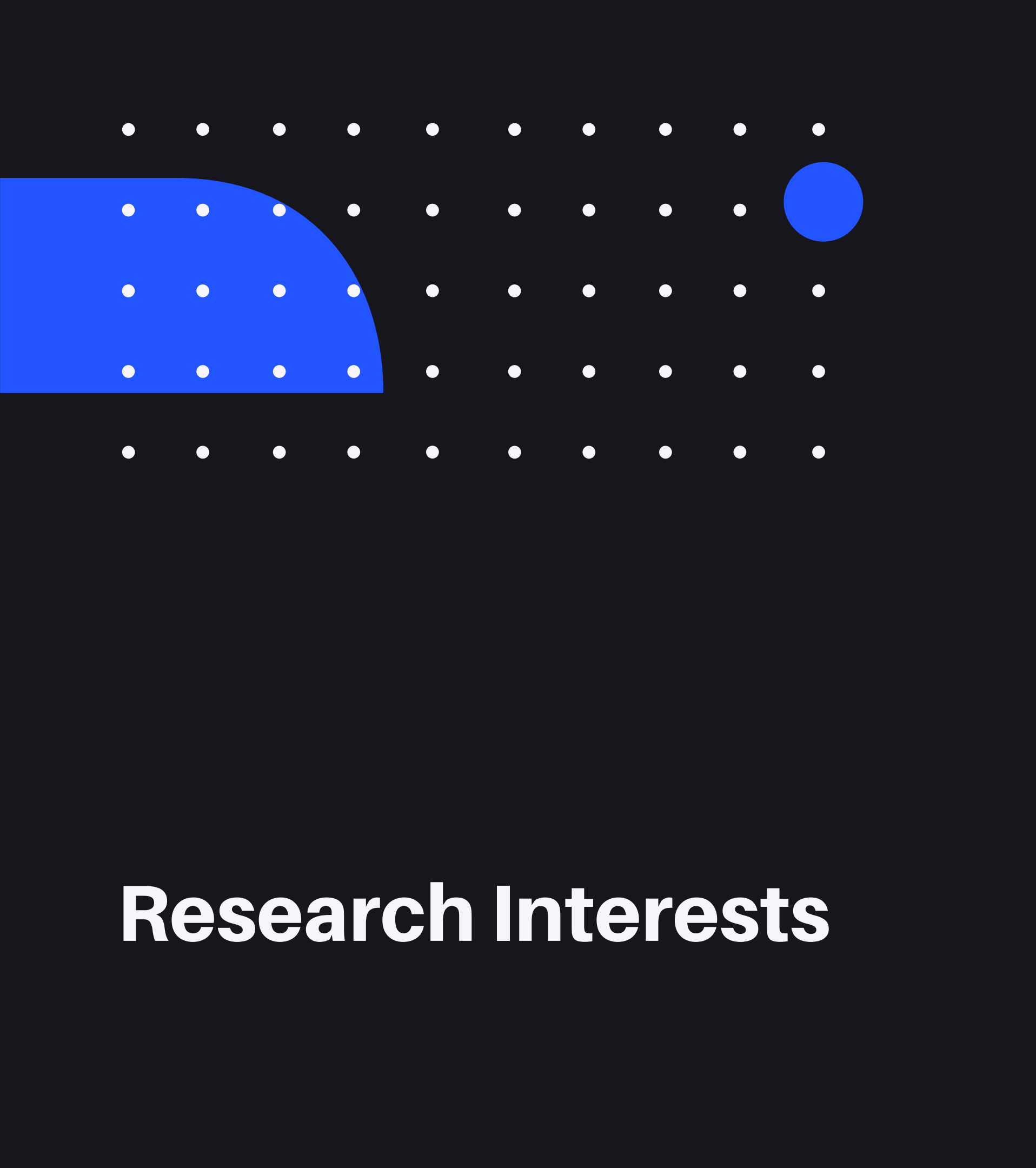
Education

- Bachelor's in CS - Algeria
- Master's in DS - Innopolis
- PhD in AI - Sorbonne

Experience

- PepsiCo
- Provectus
- Innopolis Research labs





Research Interests

1

**Computer
Vision**

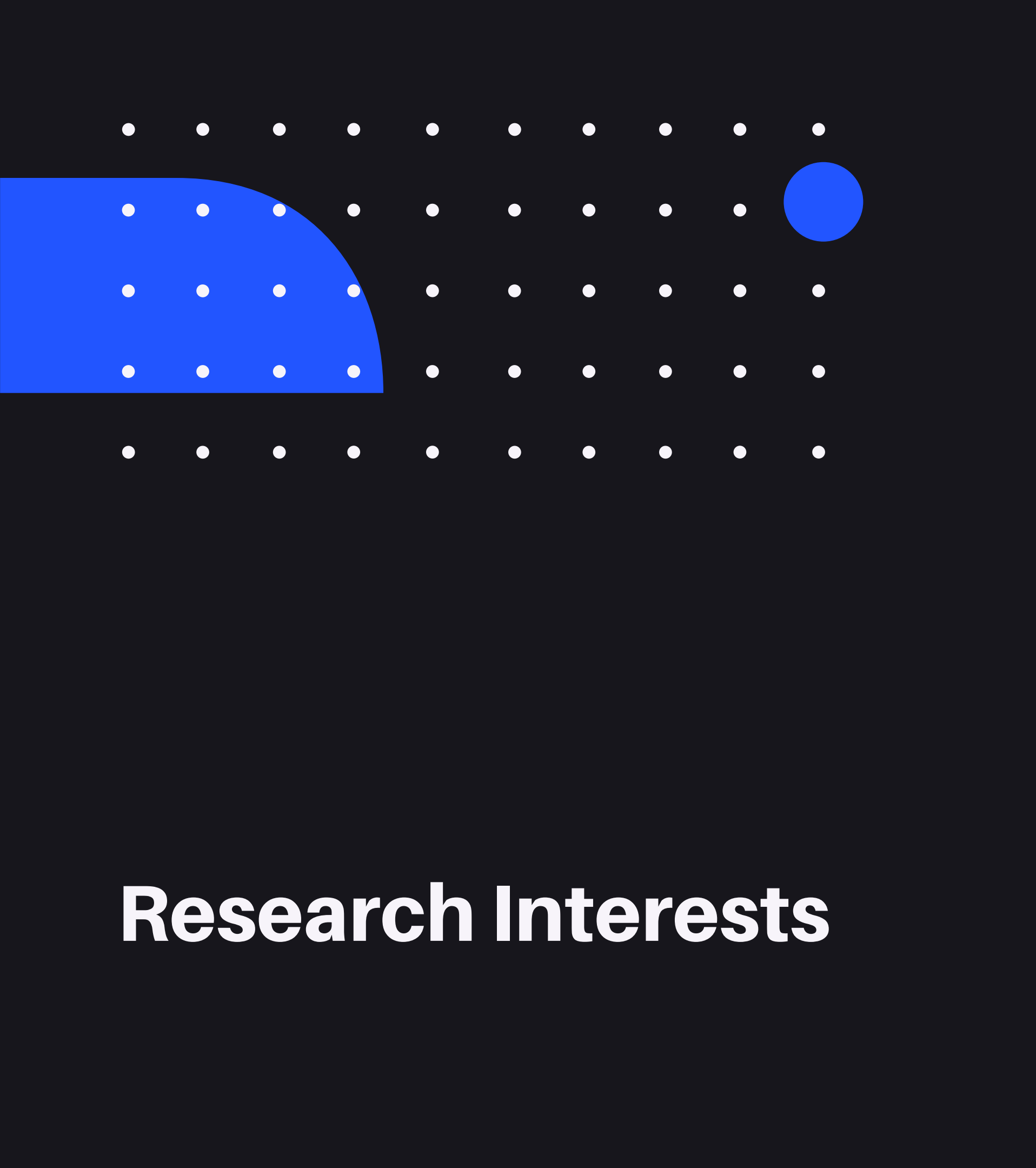
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**Domain
Adaptation**

3

**Knowledge
Graphs**





Research Interests

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Computer
Vision

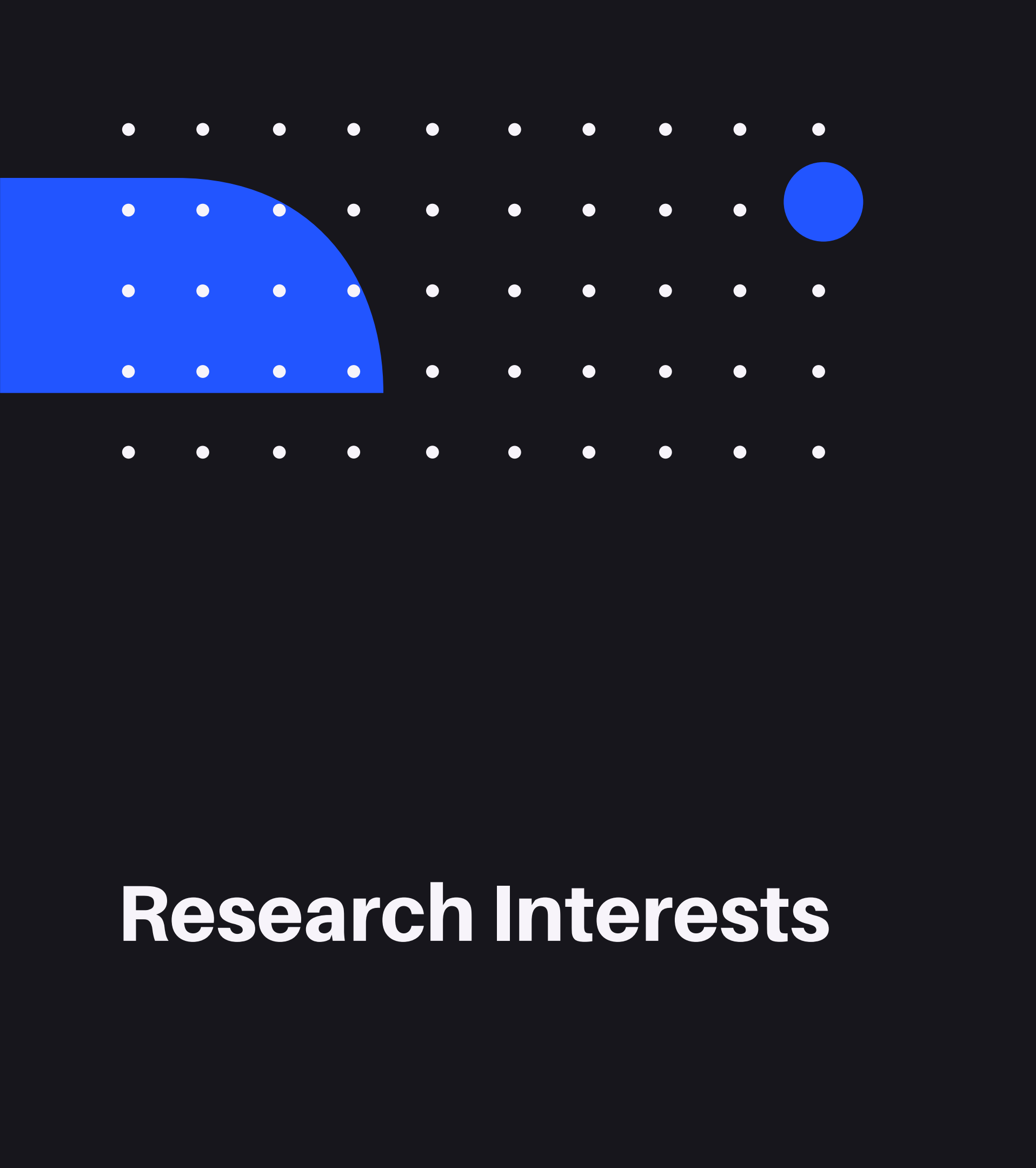
2

**Domain
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Research Interests

1

Computer
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Contact Me

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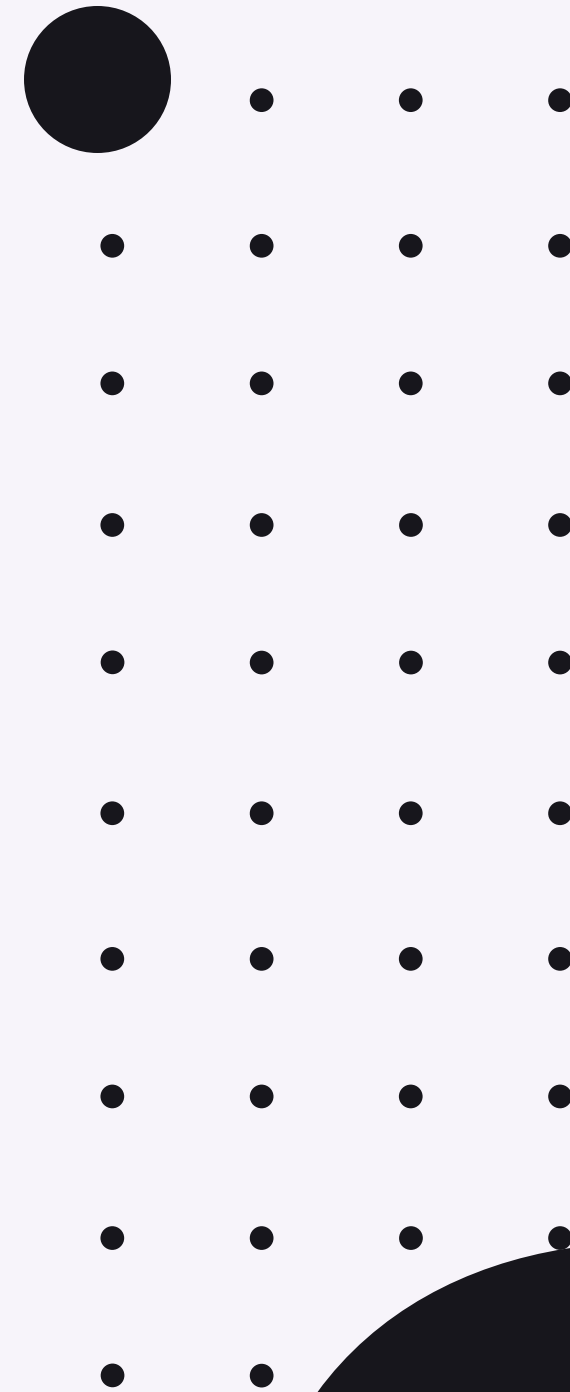
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Theory

- Linear Algebra
- Calculus
- Statistics
- Machine learning

Practice

- Python
- Algorithms and DS
- numpy/pandas
- Sklearn



Pre-
requisites

Projects 50%

- Homeworks 25
- Project 25

Quizzes 50%

- MCQ1 25
- MCQ2 25

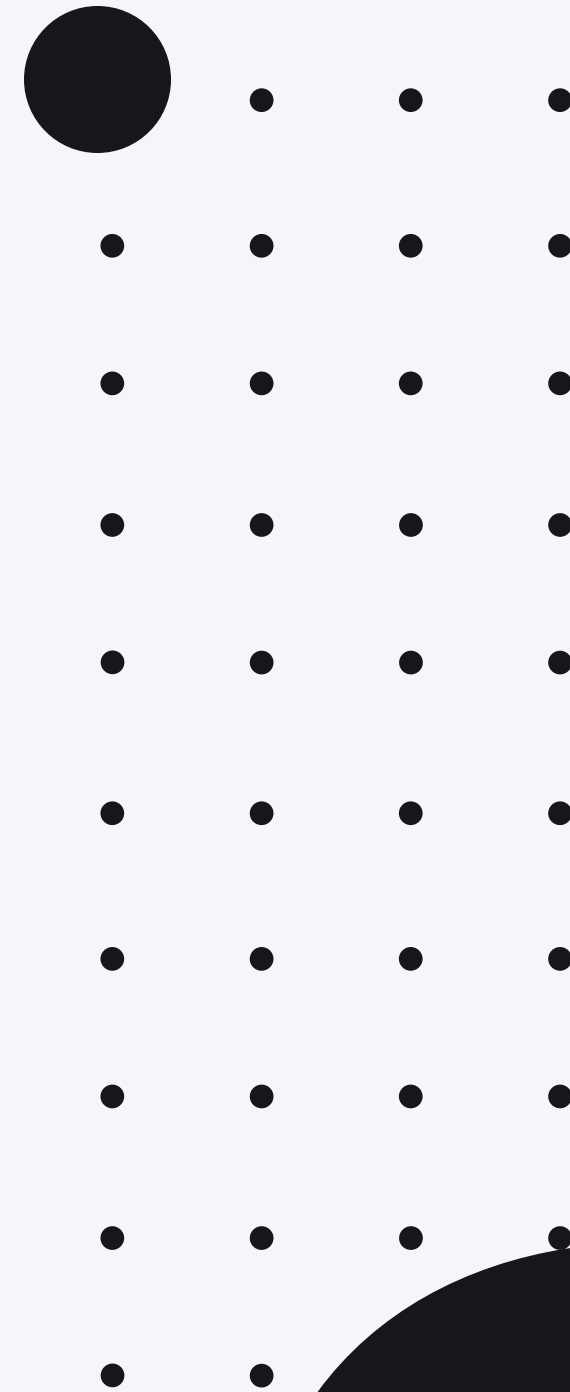
Grading Criteria

Lectures

- Online - Zoom
- 2 MCQs

Labs

- Online - Zoom
- Porject based evaluation



Course Structure

1

Practical ML

HOG, SIFT, edge detection

2

CNNs

Transfer learning

3

Object detection

Yolo, RCNN, ViT

4

Advanced CV

Diffusion, tracking

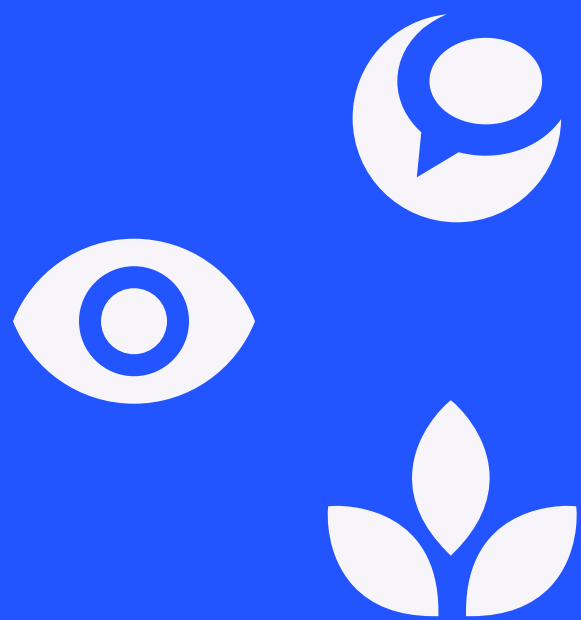
Outline



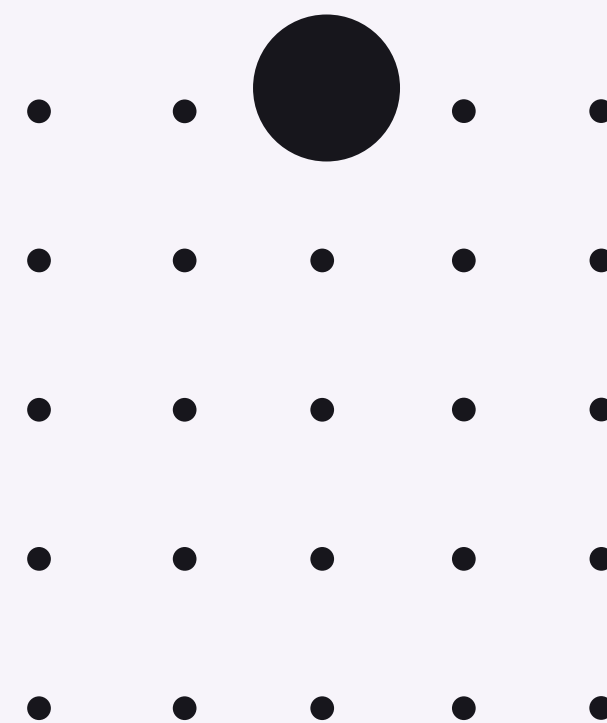
The goal of the course is:

1. Develop a good understanding of how Computer vision models learn.
2. Evaluate the strengths and weaknesses of the many CV models.
3. Design and implement CV models for object detection, classification, instance segmentation, and generation in python.

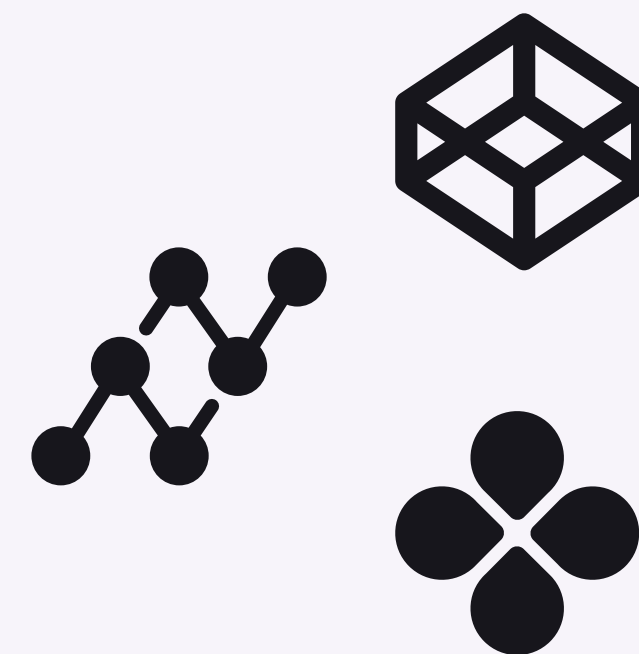


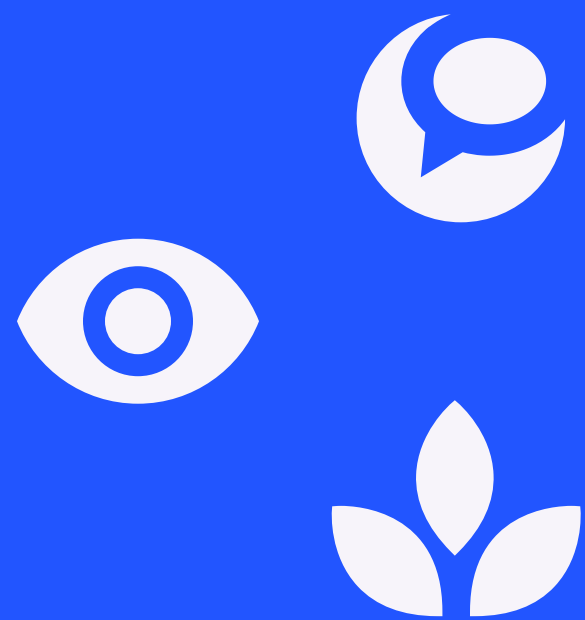


Let's get
started

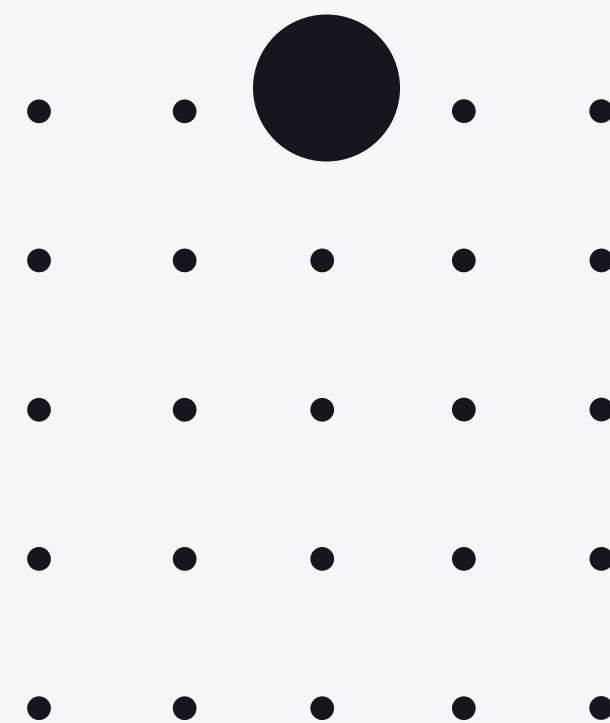
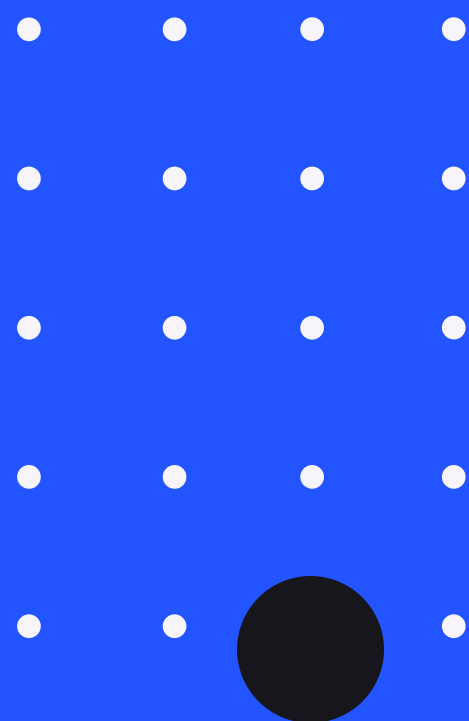


Let's get to
know each
other





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