



UNIVERSITÁ DI VERONA



# USO DEGLI LLM PER ANALIZZARE E PREDIRRE TRAIETTORIE TURISTICHE

OTTOBRE 2025

Mattioli Simone

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# INTRODUZIONE AL PROBLEMA

01



# PREDIRRE?

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Come possiamo predire dove andrà un turista nella sua prossima tappa?

## SFIDE ATTUALI

- Pattern complessi e non lineari
- influenze multiple
- modelli tradizionali insufficienti

## L'OPPORTUNITÀ

- LLM e le loro capacità emergenti
- Sfruttare Modelli in Locale
- Capacità Di Calcolo

# OBIETTIVI

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02

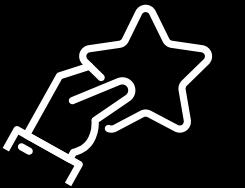
# COSA SI VUOLE RAGGIUNGERE?

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## Performance Accettabili

Deve Essere Utilizzabile ( real time? )



## FrameWork Indipendente da LLM

Modello intercambiabile



## Validazione Su Dati Reali

Dove Sta Andando Il Turista ?

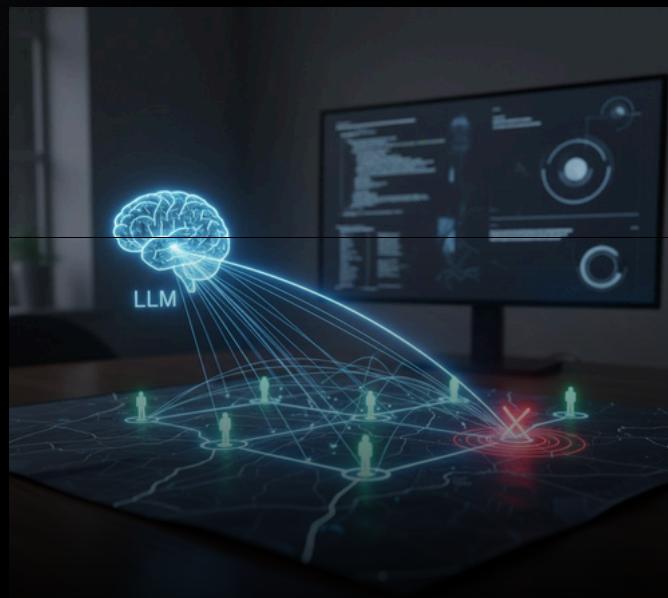
# METODOLOGIA

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01

# STEP COMPIUTI

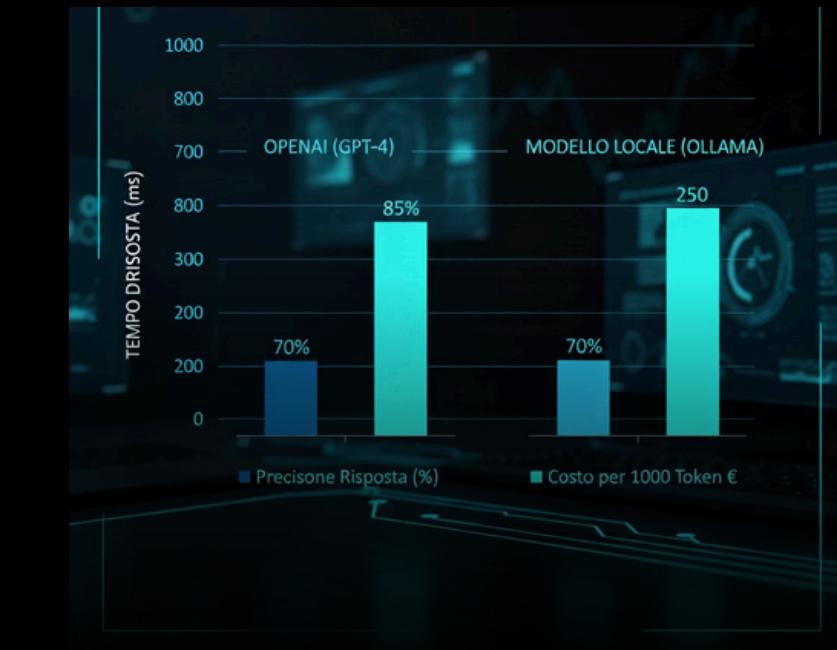
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**01** Ricerca SOTA



**02** LLM-Mob Locale



**03** Analisi Performance

# METODOLOGIA

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LLM-MOB Framework

01

The contemporary building, with its sleek lines and innovative materials, stands as a testament to modern architectural design.



# METODOLOGIA

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02



## OpenAI API KEY

Rimozione Dipendenza a pagamento  
per un framework totalmente gratuito  
ed Open Source



## Ollama

PRO: privacy e sicurezza dei dati



## Efficienza ed Efficacia

Trade Off Accettabile

# DATASET VERONACARD

intercambiabile

## Contemporary Building

The contemporary building, with its sleek lines and innovative materials, stands as a testament to modern architectural design.



# STRATEGIE DI PROMTING

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01

# APPROCCIO INCREMENTALE

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BASE

NOME

---

Nel prompt passiamo:

- nome
- dei POI visitati

GEOM

NOME  
COORDINATE

---

Nel prompt passiamo:

- nome
- coordinate spaziali
- dei POI visitati

TIME

NOME  
COORDINATE  
TIMESTAMP

---

Nel prompt passiamo:

- nome
- coordinate spaziali
- timestamp temporali
- dei POI visitati

# AMBIENTE DI SVILUPPO

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01

# HPC LEONARDO

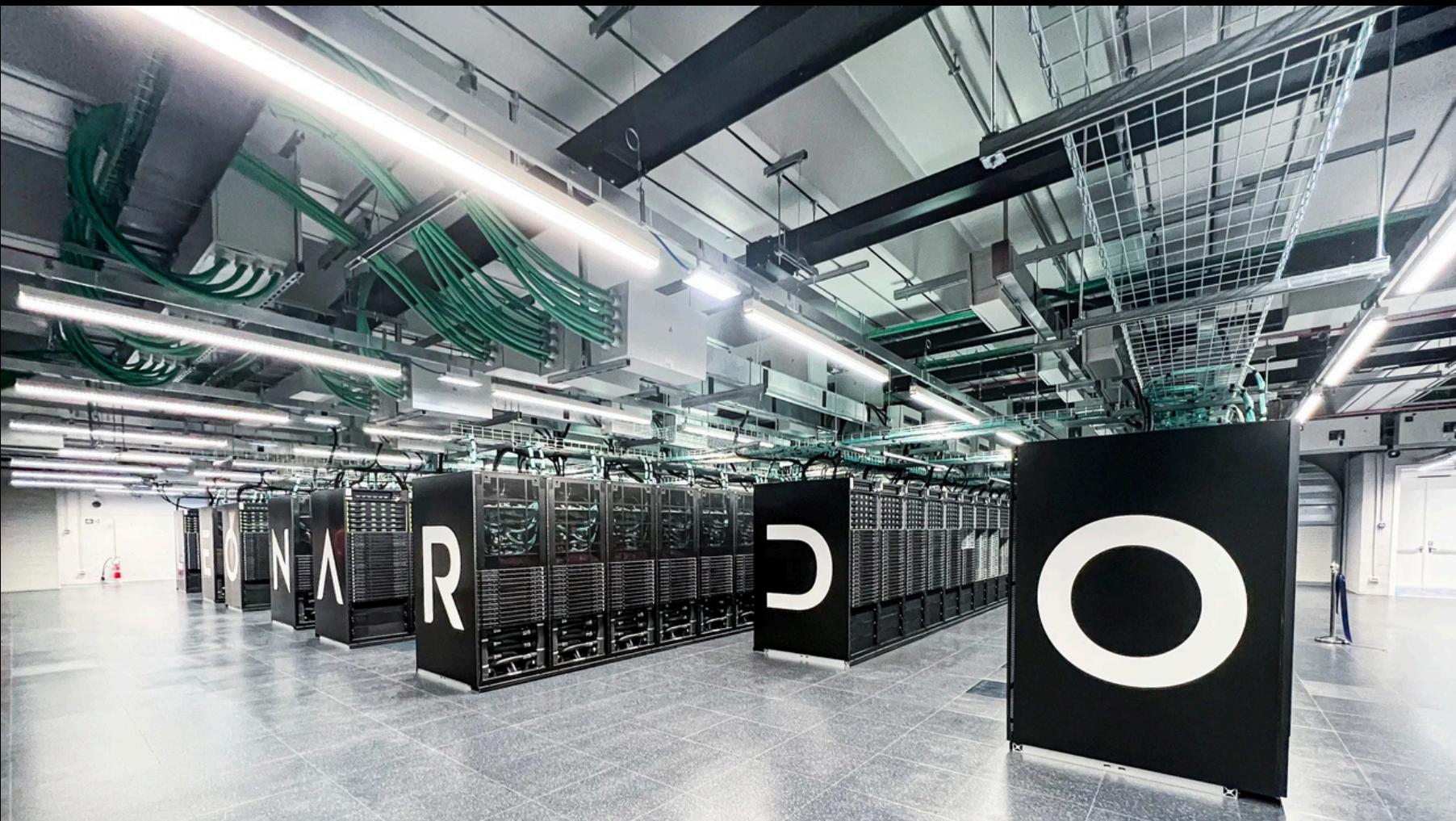
BOOSTER MODULE

## Architettura

3456 NODI

512GB Di RAM DDR4

4x NVIDIA custom Ampere A100



# TIMELINE

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01



## DOCUMENTAZIONE

Studio per l'utilizzo corretto



## SVILUPPO

Nuove funzionalità



## DEVELOPMENT

Attesa allocazione risorse



## ESECUZIONE

Sul nodo di Leonardo

# FLUSSO DI LAVORO

The project timeline outlines key milestones and deadlines to ensure that all phases are completed efficiently and on schedule. It begins with the initiation phase, where project goals are clearly defined, and resources are allocated. Following this, the planning phase involves detailed strategizing and the development of a comprehensive roadmap.

# RISULTATI OTTENUTI

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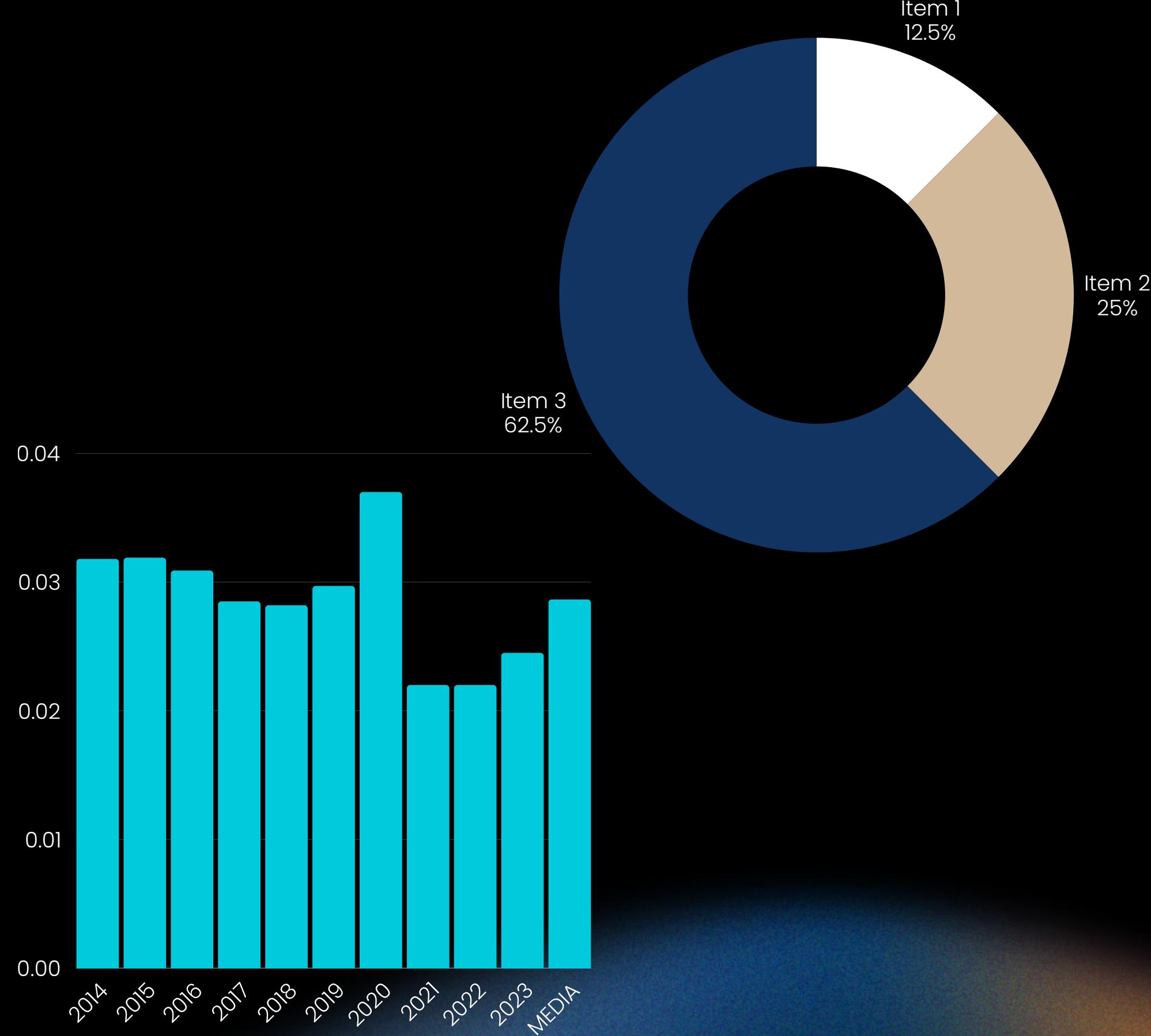
01

# DATA ANALYSIS

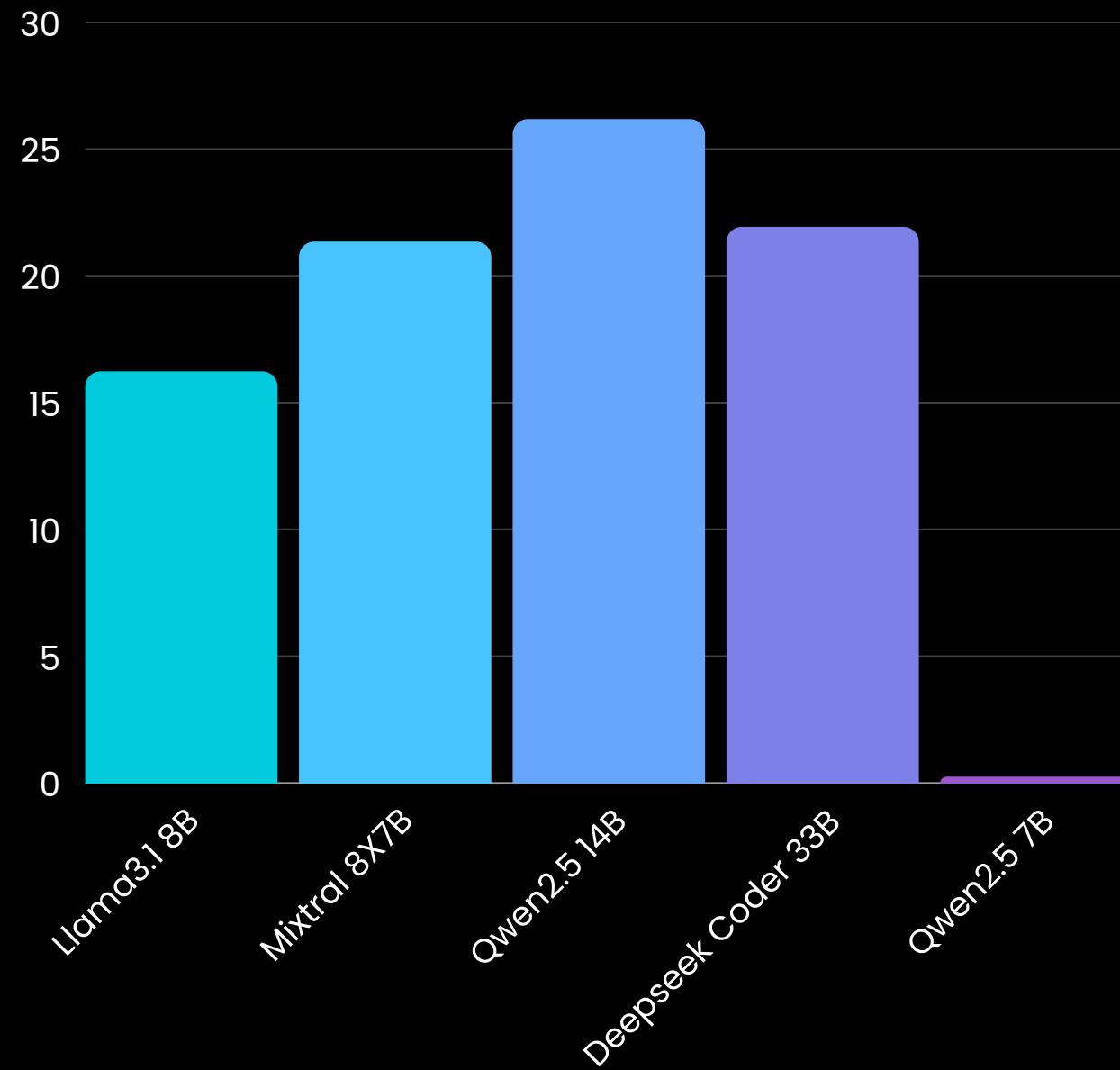
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This data indicates that our company is experiencing higher profits this year.

Most of the profits earned come from our new line of eco-friendly products. These products have resonated well with consumers who are increasingly conscious of their environmental impact.



# CONFRONTO INTER-MODELLO



## Llama3.1 8B

Our domestic sales have remained stable this year, reflecting our strategic efforts to maintain market presence and improve customer satisfaction.

## Mixtral 8x7B

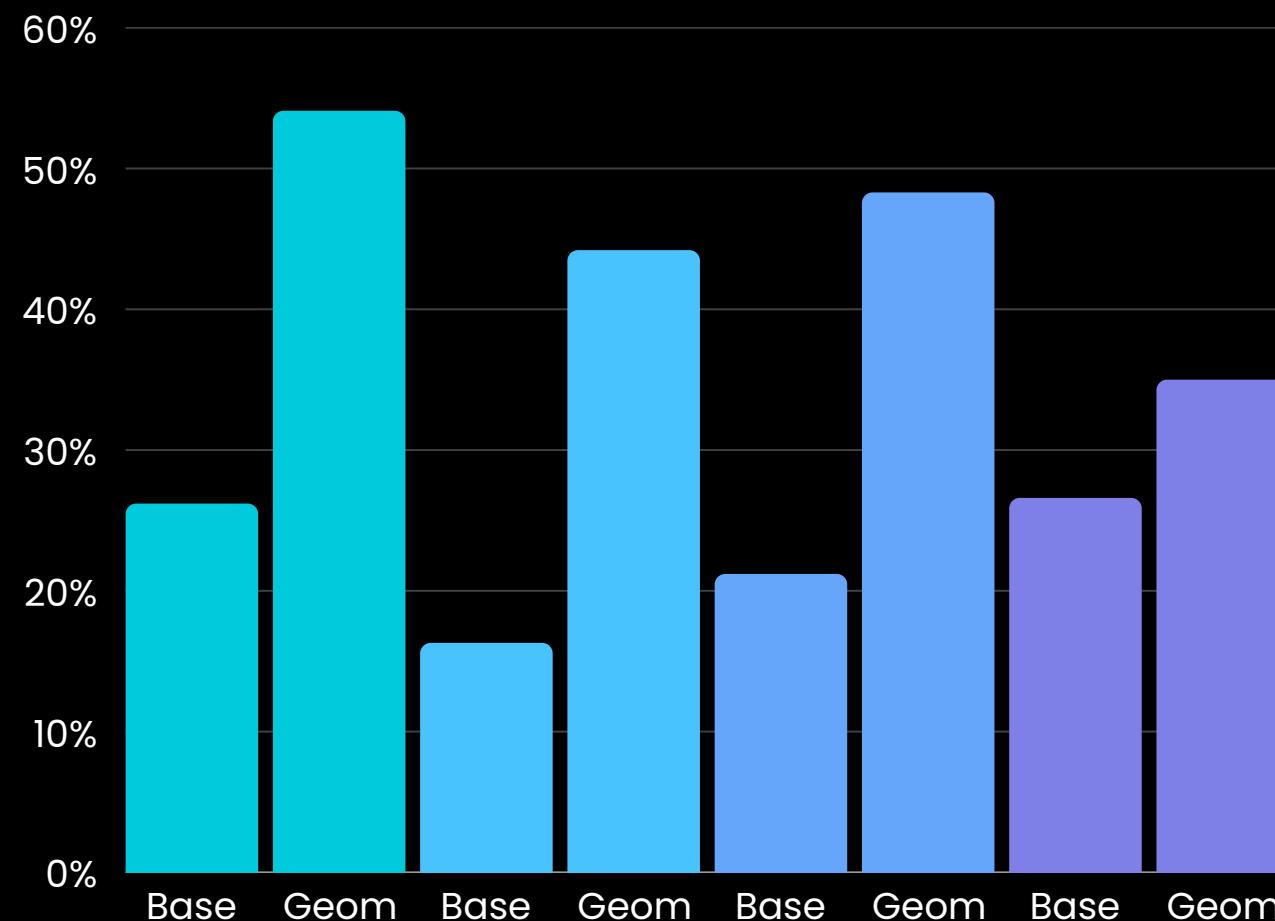
International sales begin to increase in the second quarter, driven by expanding into new markets and strengthening partnerships with key distributors.

Qwen2.5 14B

Qwen2.5 7B

Deepseek Coder 33B

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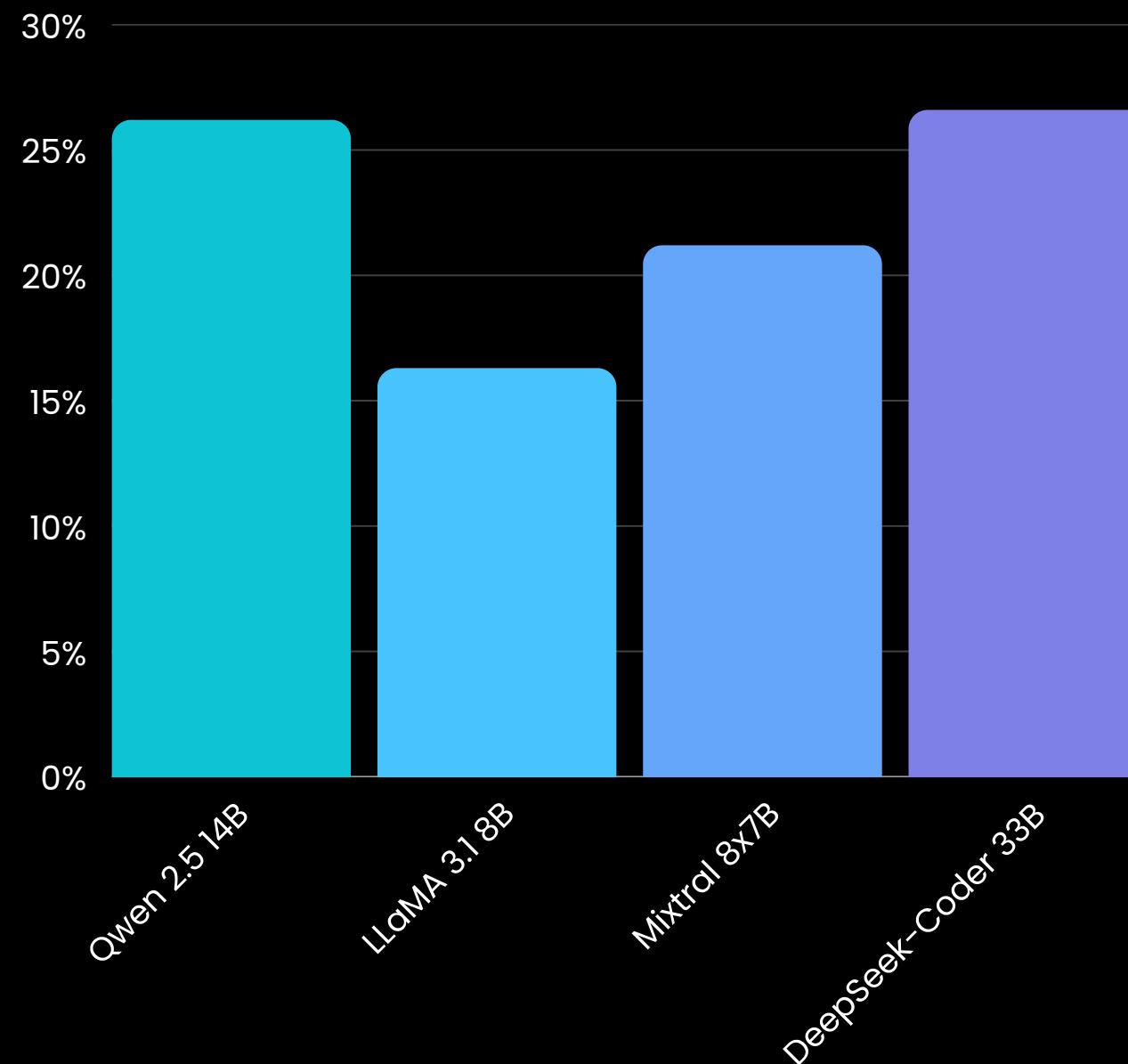
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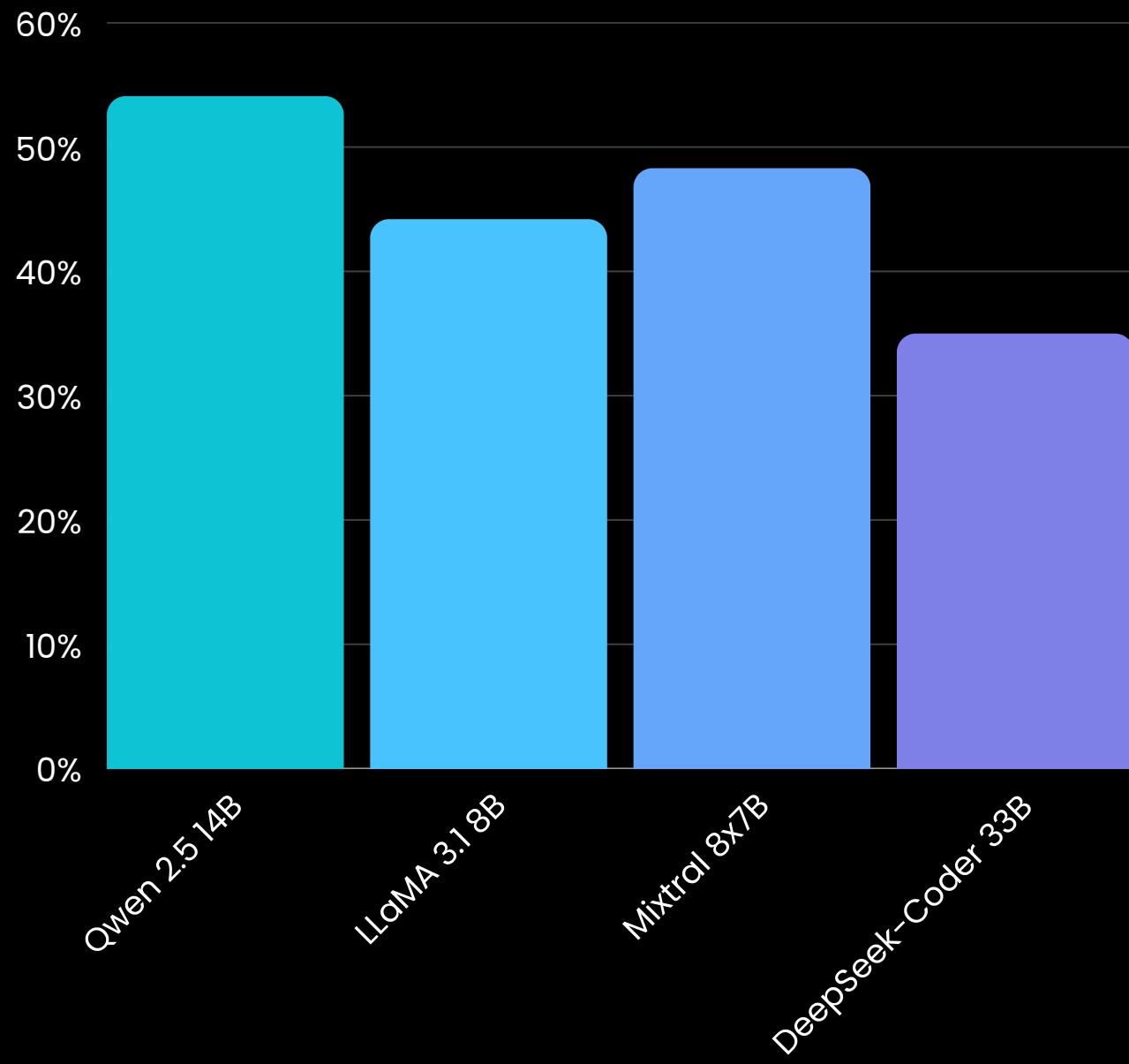
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# CONCLUSIONE

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01

# IMPLEMENTAZIONI FUTURE

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## Sistema Real Time Nelle città

Per distribuire uniformemente i turisti nei punti di interesse

## Gestione Flussi turistici su piste da sci

Ottimizzazione distribuzione sciatori per evitare sovraffollamento

## Assicurazioni turistiche dinamiche

Prezzi adeguati sui pattern di mobilità delle visite nei musei e attrazioni



# SUPPORTO PER QUESTO IL LAVORO

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## CINECA

Accesso all'infrastruttura HPC Leonardo



## UNIVERSITÀ DI VERONA

Accesso Al DataSet VeronaCard



## PROF.SSA MIGLIORINI

Supervisione e guida durante lo sviluppo



## AMICI E COLLEGHI

Sostegno nei momenti più critici



## FAMIGLIA

Supporto durante l'intero percorso universitario

*Se vuoi andare veloce, vai da solo. Se vuoi andare lontano, vai insieme*

# GRAZIE PER L'ATTENZIONE

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