LEVEL 0 SUMMARY TEMPLATE

# Instruction

This summary will be shared with L1, L2 and L3. Keep in mind that these levels do not have a full understanding of the subject. Try to write something easy to understand but not simplistic. Your summary should explain the main contribution of the paper with your own words. Furthermore, you can use simple examples, if necessary, to better explain the main ideas. Your grade will take into account the quality of your summary, the formal English language in which it has been written, and whether it helps the levels above in their own work.

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Name of your Level 1: Réhane AHAMADA

Source (e.g. scholars.google.com):

Article 1 :https://www.sciencedirect.com/science/article/abs/pii/S0264275118315968

Article 2: https://journals.openedition.org/rhc/1204

Article 3**:** https://www.annualreviews.org/doi/pdf/10.1146/annurev-pharmtox-010919-023324

Article 4 :https://epubs.siam.org/doi/epdf/10.1137/1.9781611977653.ch106

# Paper title: -article 4 :Data-centric AI: Perspectives and Challenges/

# article 3 :Big Data and Artificial Intelligence Modeling for Drug Discovery /

# article 1 : On big data, artificial intelligence and smart cities /

# article 2 : IA pour une histoire culturelle

# Keywords specific to the paper:

# Resume 1:

# Big data

# Internet of things

# AI

# Smart cities

# Urban governance

# Data analysis

# Sustainable Development Goals

# Climate change mitigate

# Sustainability

Summary of the main contributions:

The article discusses the increasing availability and importance of Big Data generated by human activities, particularly in the context of urban environments. It highlights the role of technologies such as the Internet of Things and Artificial Intelligence in leveraging this data for decision-making in smart cities. The article explores the potential benefits and challenges of adopting AI in urban environments and the need for careful integration into the social and environmental context. It also proposes a framework for building sustainable, safe, and resilient cities aligned with the UN's Sustainable Development Goals.

Supported by a software application? (If yes, provide more details): No

# Resume 2 :

CulturIA

Technoculture

Deep learning

Neural networks

AlphaGo

Generative Adversarial Networks (GANs)

Living vs. machine

Global AI Narrative project

Science fiction

Technological singularity

Summary of the main contributions:

# The article presents the CulturIA project funded by the National Research Agency, which explores the cultural history of AI from its origins to deep learning. It emphasizes viewing AI as a "technoculture" influenced by societal institutions and combines history of science, ideas, and sociology of sciences. The paper discusses AI's performance surpassing humans in various tasks, its ability to simulate human interactions, and recent advancements in machine learning and unsupervised deep learning. It explores the ongoing debates on the boundary between living and machine, advocates for a comprehensive cultural history of AI, and suggests examining AI through fictional representations and artistic productions to humanize its history.

# Not supported by a software application

# Resume 3 :

Drug discovery

Artificial Intelligence (AI)

Big Data

PubChem

ChEMBL

DrugBank

Deep learning

Machine learning

Personalized medicine

Precision Medicine Initiative

Genome sequencing

Biomarkers

Summary of the main contributions:

The article discusses the challenges in drug discovery and the role of Artificial Intelligence and big data in addressing them. It highlights the limitations of current methods in predicting drug effects accurately and emphasizes the transformative impact of big data repositories like PubChem and ChEMBL. The paper show the evolution of computational approaches from simple chemical features to advanced deep learning models, as well as the emergence of personalized medicine. It concludes by emphasizing AI's potential in accelerating drug discovery and improving personalized treatments, despite ongoing challenges related to data quality and safety.

Resume 4 :

Data-Centric AI (DCAI)

Data quality

AI models

Training data

Evaluation data

Data maintenance

Data acquisition

Data pipelines

Model reliability

Unfairness in data

Standards in DCAI

Summary of the main contributions:

The article discusses the emerging focus on data quality in AI, known as Data-Centric AI. It emphasizes the importance of prioritizing high-quality data over creating new models for reliable AI outcomes. DCAI involves techniques for developing, evaluating, and maintaining data used in AI systems, along with strategies for simplifying and improving data quality. It highlights the significance of testing AI models using evaluation data and the ongoing challenges in ensuring data quality. Lastly, it stresses the need for integrated approaches to designing data pipelines and AI models, and the establishment of standards for progress measurement in the DCAI field.

# Not supported by a software application

# Summary of the main contributions:

(Use text paragraphs, tables and if necessary, figures):

* AI model used (e.g. Neural network, etc.)
* Introduce the AI models
* How do they contribute the idea proposed by the paper?

# Supported by a software application? (If yes, provide more details)