

HARNESSING AI FOR ENHANCED PHARMACEUTICAL PRACTICE: AN AMERICAN PERSPECTIVE ON GLOBAL HEALTH IMPACT

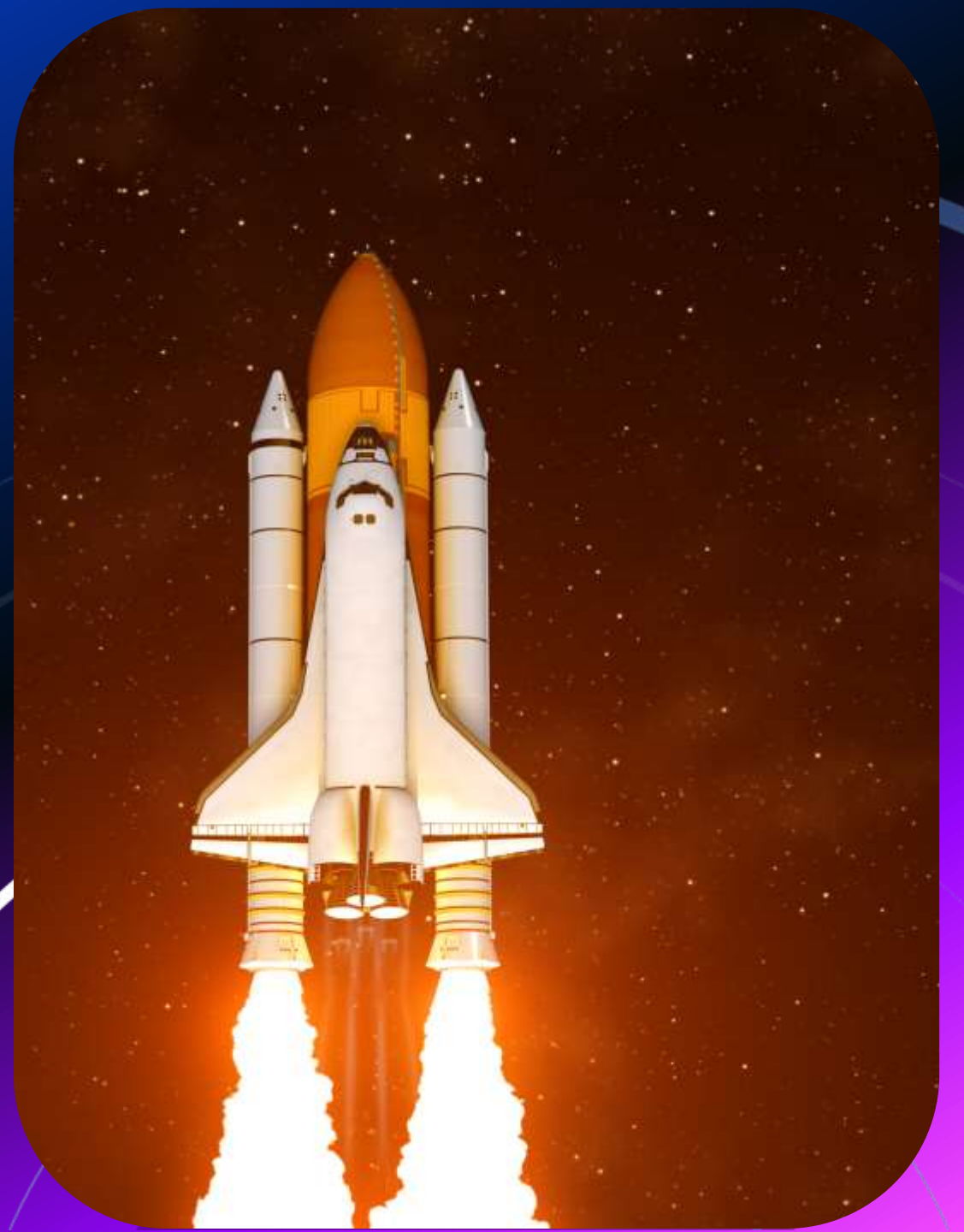
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The 25th Conference of the Scientific Association of Colleges of
Pharmacy in the Arab World
The 1st International Conference of the Faculty of Pharmacy at LIMU

NOVEMBER 3, 2024
BENGHAZI, LIBYA

AGENDA

- Blast off: Defining AI in Pharmaceuticals
- Explore the applications of AI in the U.S. Pharmaceutical Industry
- Orbit the challenges and opportunities in the Middle East
- Ethical and Regulatory Considerations in AI adoption



ARTIFICIAL INTELLIGENCE (AI)

AI refers to the simulation of human
intelligence in machines

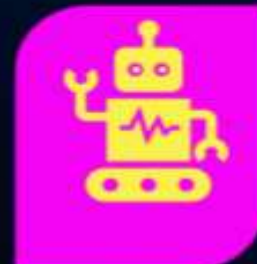
CURRENT TRENDS IN THE PHARMACEUTICAL INDUSTRY



Automated systems for dispensing medications and managing inventories



Advanced analytics for drug development



AI-driven clinical trials and predictive modeling



Personalized medicine through genetic data analysis

ROBOTS FILL CUSTOMER'S PRESCRIPTIONS

According to a CNBC report in 2022, each robot can fill 300 prescriptions in an hour. This is the number of prescriptions filled at one of its locations by a pharmacist and staff for an entire day.



ACCELERATED DISCOVERY PROCESS

AI reduces drug discovery timelines by analyzing massive datasets to identify promising compounds faster than traditional methods

COST-EFFECTIVE SOLUTIONS

With AI, companies can cut costs by predicting compound success earlier, minimizing expensive lab testing

ROLE OF AI IN HEALTHCARE

- Enhance decision-making
- Optimize workflows
- Improve patient outcomes

AI IN PHARMACEUTICALS

AI is transforming the industry by

1. Enhancing drug discovery
2. Personalizing treatments
3. Providing cost-effective solutions



GENERAL PRODUCTIVITY

Employees use a custom version of ChatGPT to manage their day, such as writing emails, organizing work tasks, and even bouncing ideas for projects.

"It's always great to have someone to bounce ideas off of...someone who's available to you 24/7."

Impact: ChatGPT increases efficiency by reducing the time spent on routine tasks, freeing up time for strategic thinking.



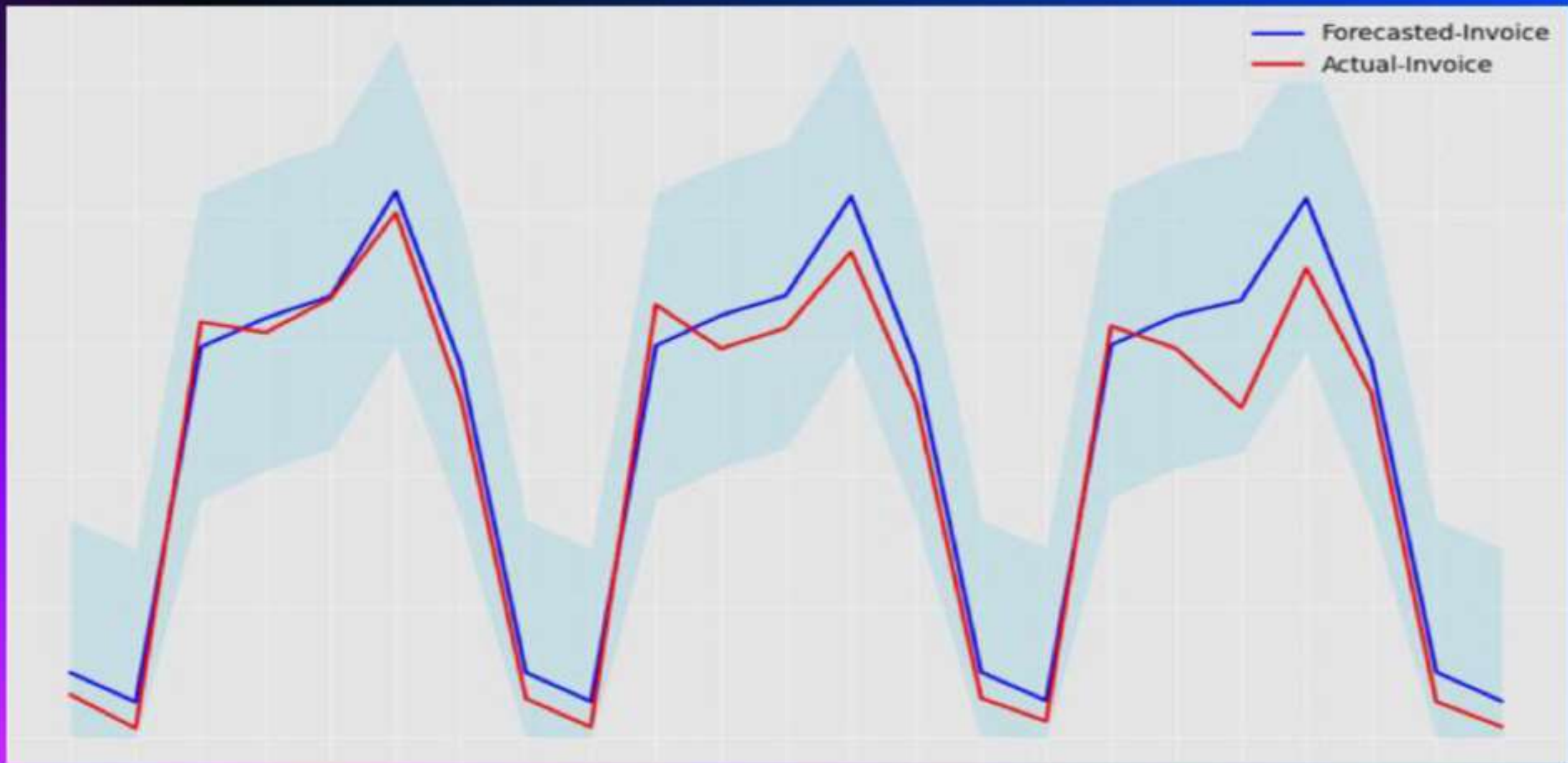
QUALITY ENGINEERING

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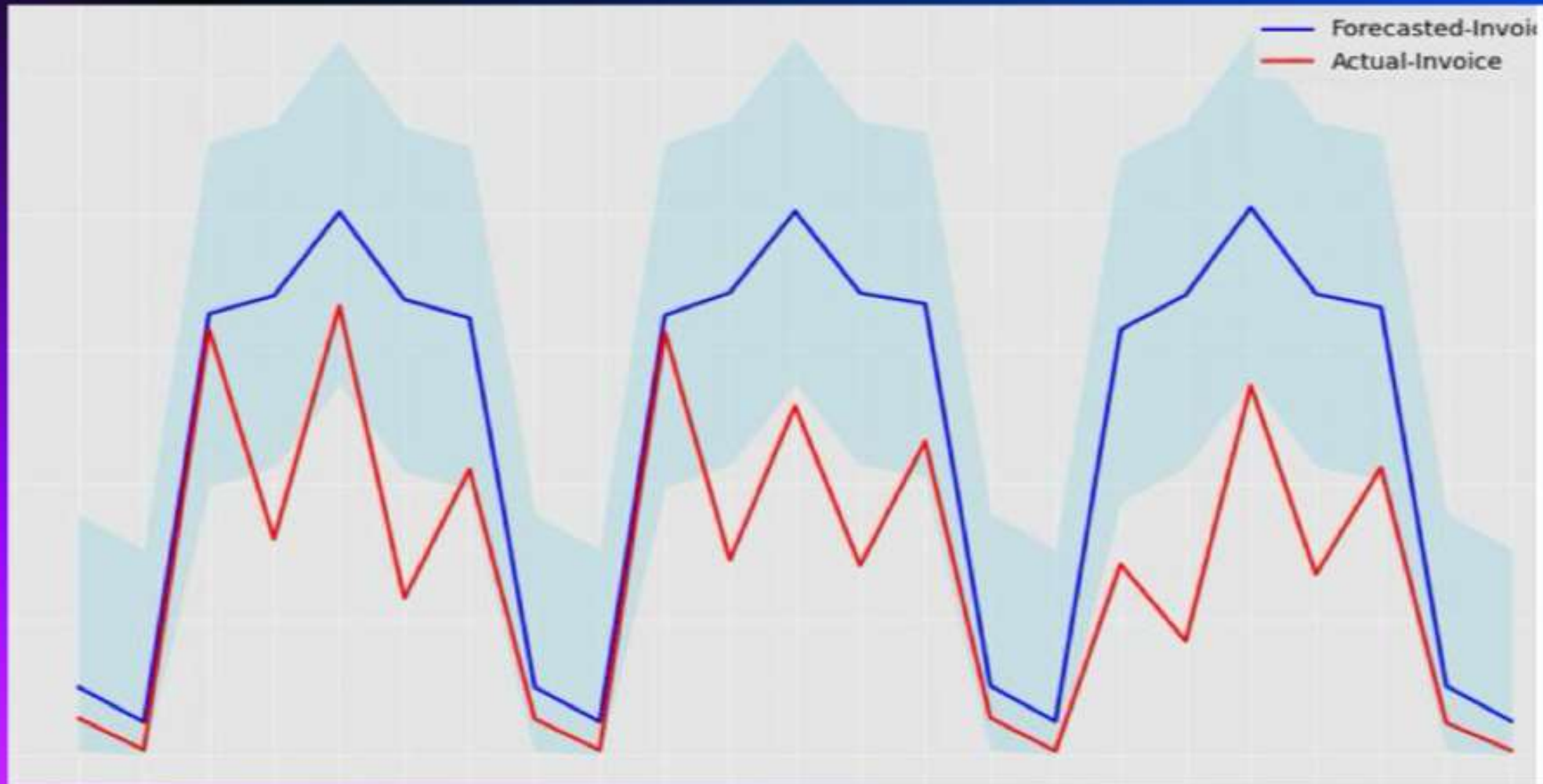
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FORECAST MODELING



Top – expected forecast, model built to predict invoice-count per day, per supplier
Bottom – Real results – supplier sends invoices-count outside the predicted bounds

FORECAST MODELING



Top – expected forecast, model built to predict invoice-count per day, per supplier
Bottom – Real results – supplier , count of supplier outside the predicted bounds signaling a red flag

HEALTHCARE DELIVERY IMPACT

This table summarizes the transformative roles of AI in enhancing healthcare delivery across various areas.

AREA	AI IMPACT	EXAMPLES
Clinical Decision-Making	Improved accuracy	Enhanced diagnostic support
Resource Allocation	Optimized inventory	Streamlined medication distribution
Patient Engagement	Enhanced adherence	Automated reminders

CHALLENGES IN THE MIDDLE EAST

- Lack of digital infrastructure
- Data privacy concern
- Regulatory barriers

ETHIC & REGULATION

- Patient data privacy
- Algorithmic bias
- Need for transparent AI models

visualize AI hallucinations in a pharmaceutical setting

BE CAREFUL

AI CAN GET
THINGS
WRONG



Here is a visualization of AI hallucination in a pharmaceutical setting, where medicine bottles and lab equipment morph into surreal, dreamlike objects. This represents how AI can misinterpret data in such a context. Let me know if you'd like any further adjustments!

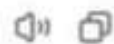


EXAMPLE OF AI HALLUCINATION

Create an image of a map to show the distance between Dallas, Texas and Benghazi, Libya



Here is the map showing the distance between Dallas, Texas and Benghazi, Libya, with both cities highlighted and a line indicating the distance. It includes key geographical features for context, designed for clear presentation. Let me know if you'd like any adjustments!





ROLE OF PHARMACISTS IN LEVERAGING AI

Integrating AI tools can enhance the pharmacist's role as a central figure in patient care.

We are all

connected

by our commitment to
service and our

passion

to improve healthcare

FUTURE

IS CREATED BY WHAT WE DO

TODAY

The background features a gradient from purple on the left to blue on the right. It is decorated with several thin white lines and small white circles. On the right side, there are several concentric white circles of varying radii, some of which are partially cut off by the edge of the frame. A horizontal white line is positioned above the text on the left side.

THANK YOU