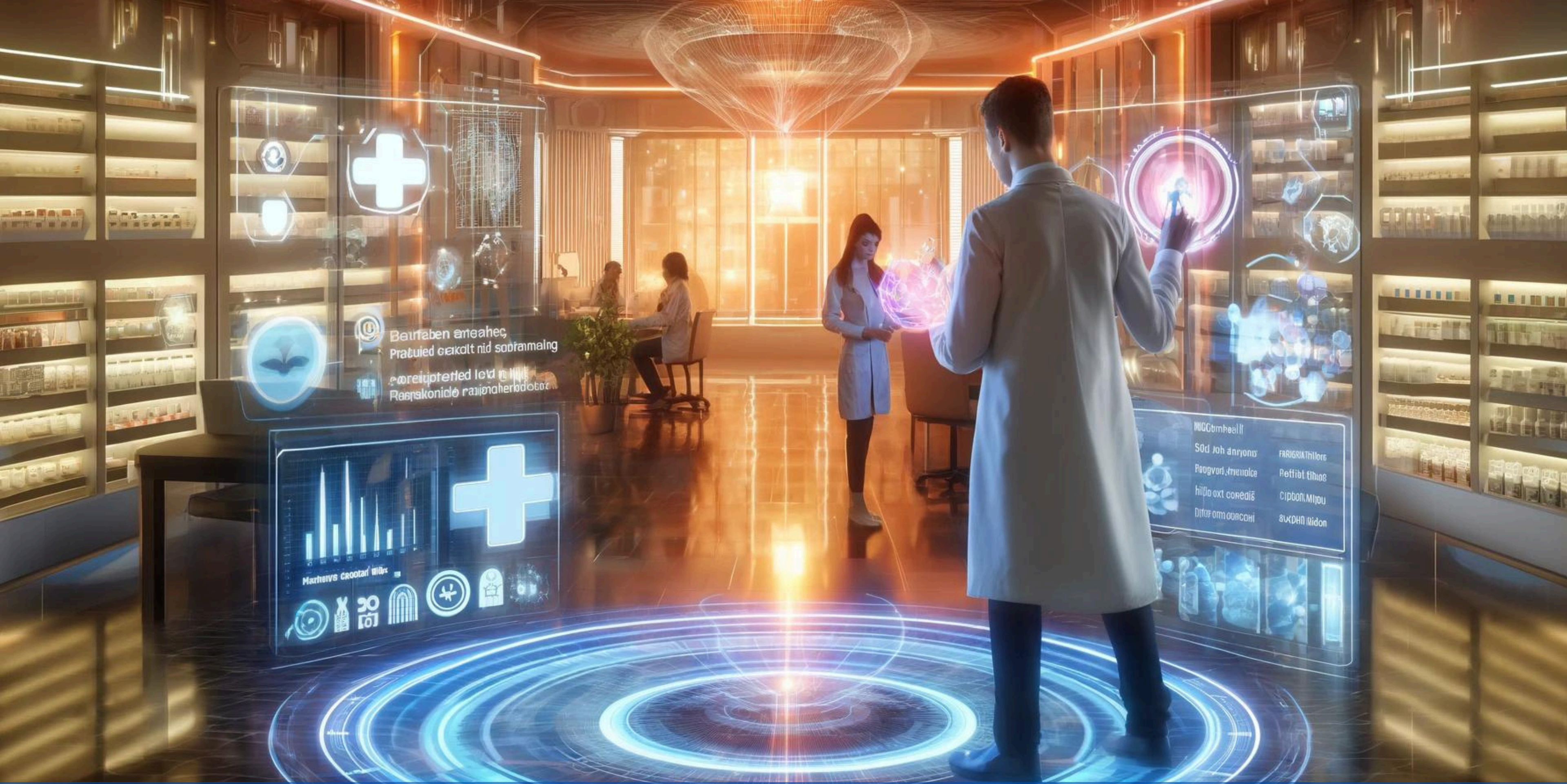


5.0 DİJİTAL ÇAĞDA ECZACILIK NEREYE KOŞUYOR?



FUTURE HEALTHCARE İSTANBUL 2024 – HEALTHY WORLD HEALTH PEOPLE

PROF.DR.OĞUZ ÖZYARAL



İKİNCİ MİLENYUM 5.0 ENDÜSTRİLEME DİJİTAL DÜNYADA ECZACILIK VE ECZACININ ROLÜ NEREYE GİDİYOR?

A HEALTHY PLANET

HEALTHY PEOPLE



DİJİTALLEŞME SÜRECİ VE ECZACILIK

E-PRESCRIPTIONS PHARMACY

PHARMACY

BIG DATA



Digital Prescription

E-Pharmacy

E - Prescription
Industry 5.0

AI DIGITAL
HEALTH
& Big Data

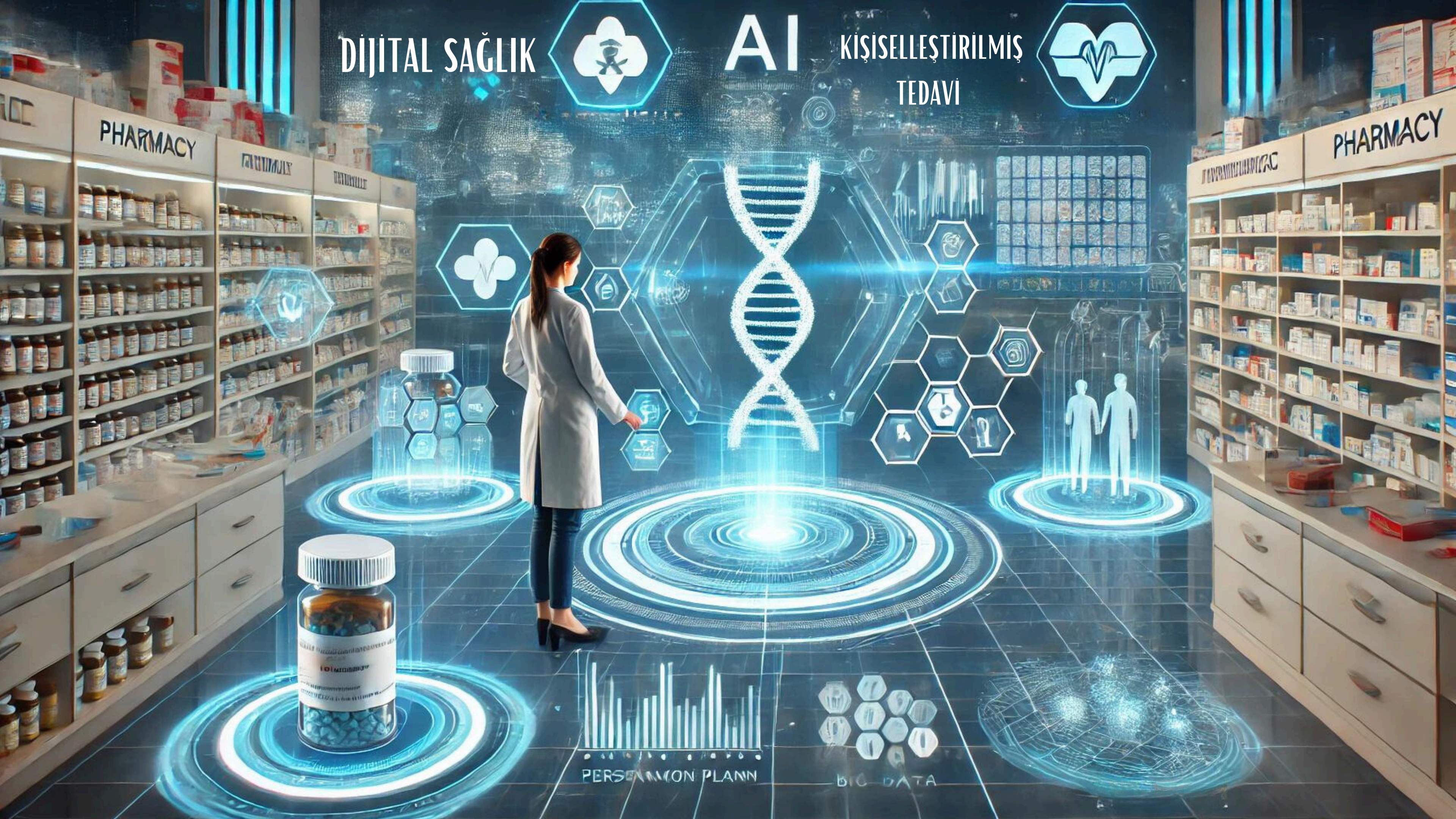
PHARMACY

DIJİTAL SAĞLIK



AI

KİŞİSELLEŞTİRİLMİŞ
TEDAVİ



DIJİTAL DÖNÜŞÜMÜN EĞİTİMDEKİ YANSIMASI

ECZACILIĞIN GELECEĞİ

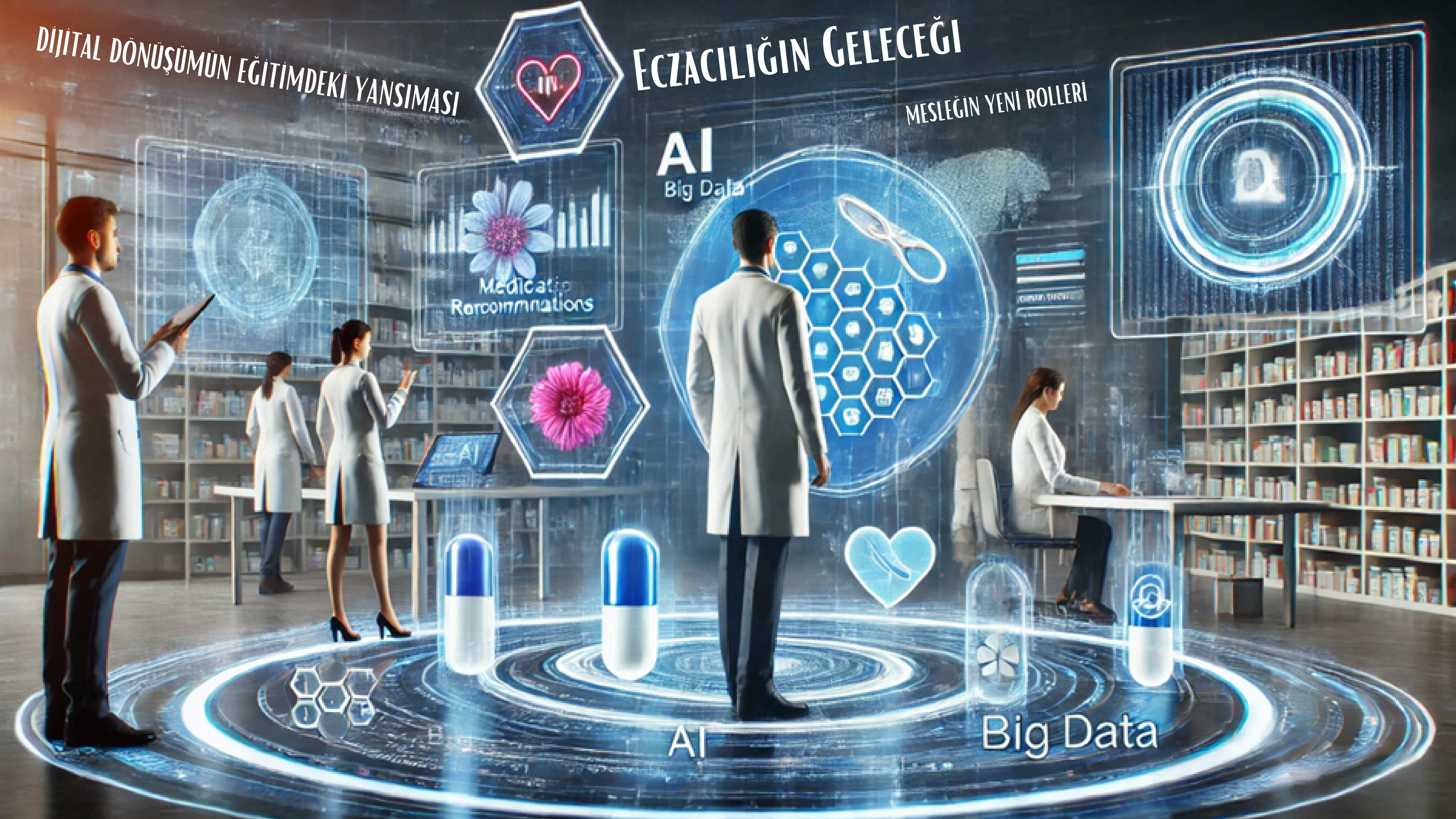
MESLEĞİN YENİ ROLLERİ

AI
Big Data

Medication
Recommendations

AI

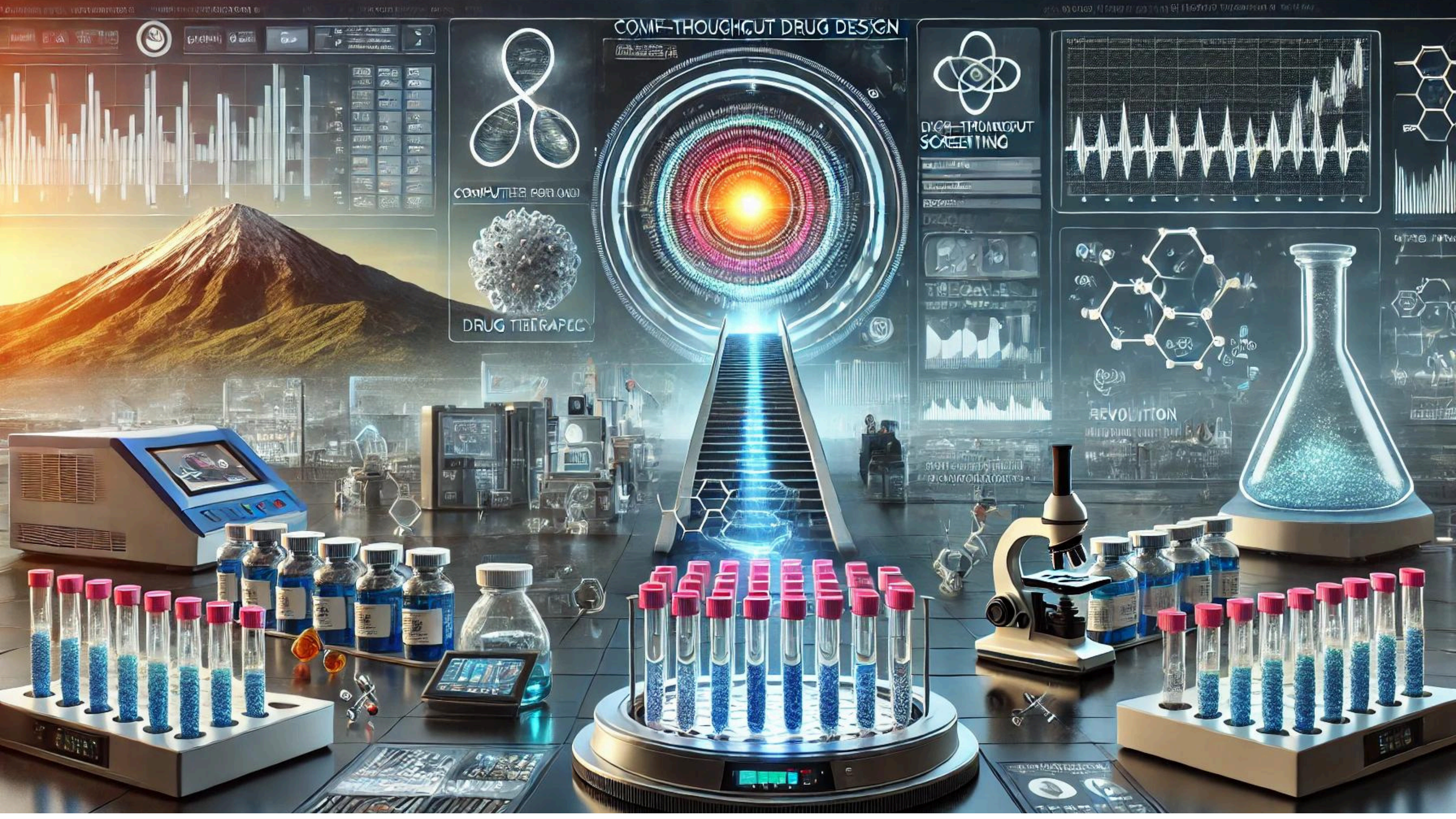
Big Data

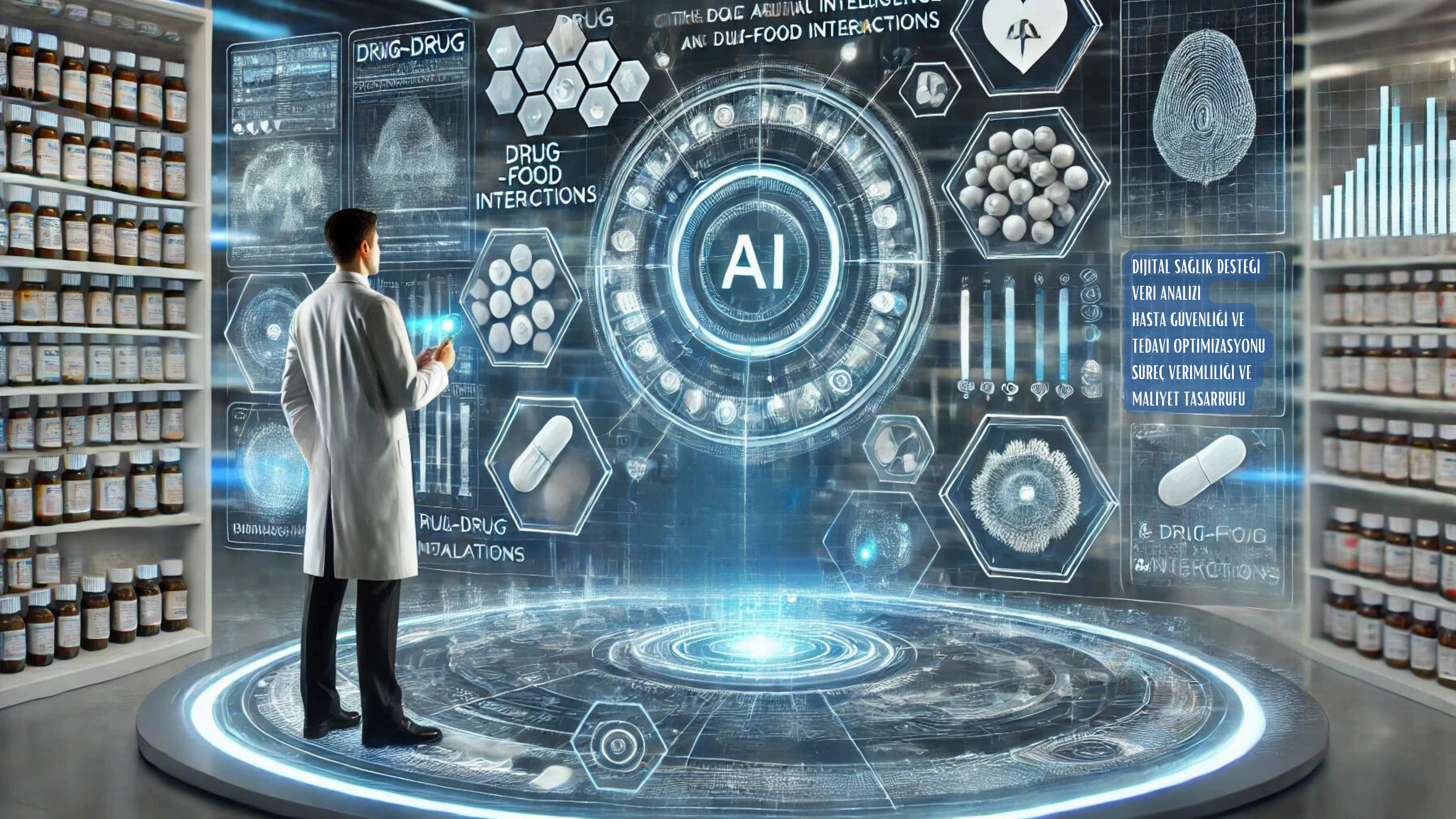




ELECTRIFICATION

IoT





DRUG-DRUG

DRUG-FOOD INTERACTIONS

ON THE DOSE ADJUSTMENT INTELLIGENCE AND DRUG-FOOD INTERACTIONS

AI

DIJITAL SAĞLIK DESTEĞİ
VERİ ANALİZİ
HASTA GÜVENLİĞİ VE
TEDAVİ OPTİMİZASYONU
SÜRECİ VERİMLİLİĞİ VE
MALİYET TASARRUFU

DRUG-FOOD INTERACTIONS

BIG DATA

Big data is information that is too large to be processed by traditional data processing applications. It is characterized by the 5 Vs: Volume, Velocity, Variety, Veracity, and Value.

PERSONALIZED DATA ANALYTICS

Personalized data analytics involves using data to tailor products, services, and experiences to individual users. This approach leverages machine learning and artificial intelligence to analyze user behavior and preferences.

DUG DATA AIS



Personalized data analytics involves using data to tailor products, services, and experiences to individual users. This approach leverages machine learning and artificial intelligence to analyze user behavior and preferences.



BIG DATA

100%	100%
90%	90%
80%	80%
70%	70%
60%	60%
50%	50%
40%	40%
30%	30%
20%	20%
10%	10%
0%	0%

BÜYÜK VERİ ANALİTİĞİ:

- İLAÇ GELİŞTİRME
- KALIPLARIN BELİRLENMESİ
- ZAMAN VE MALİYET AVANTAJI
- İLAÇ GÜVENLİĞİ

Drug Developers

AI

AI

065

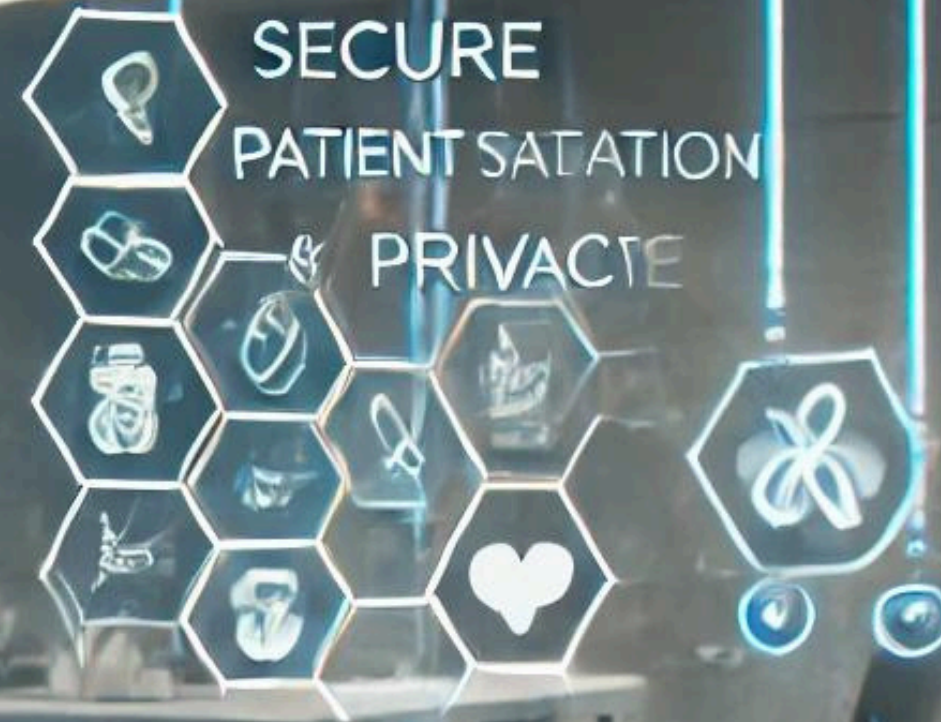
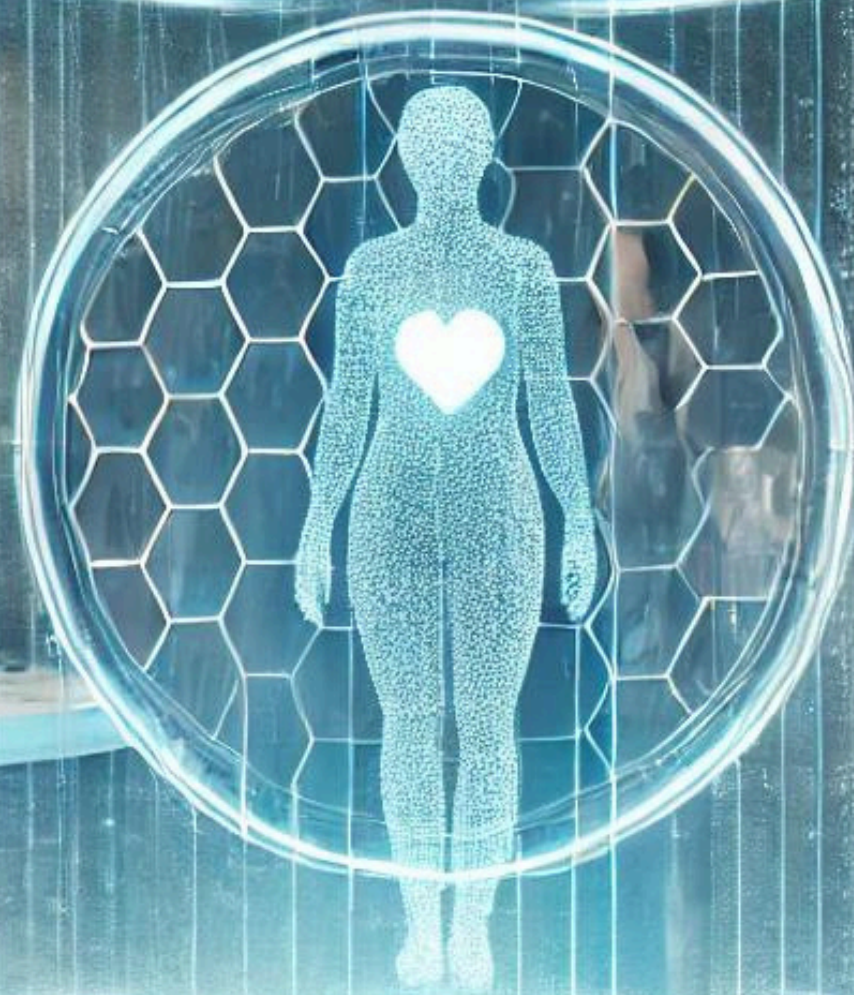
AMACY

PHARMACY

TELEPHARMACY

ACCESSIBILITY, SATISFACTION

SECURE
PATIENT SATISFACTION
& PRIVACY



SECURE



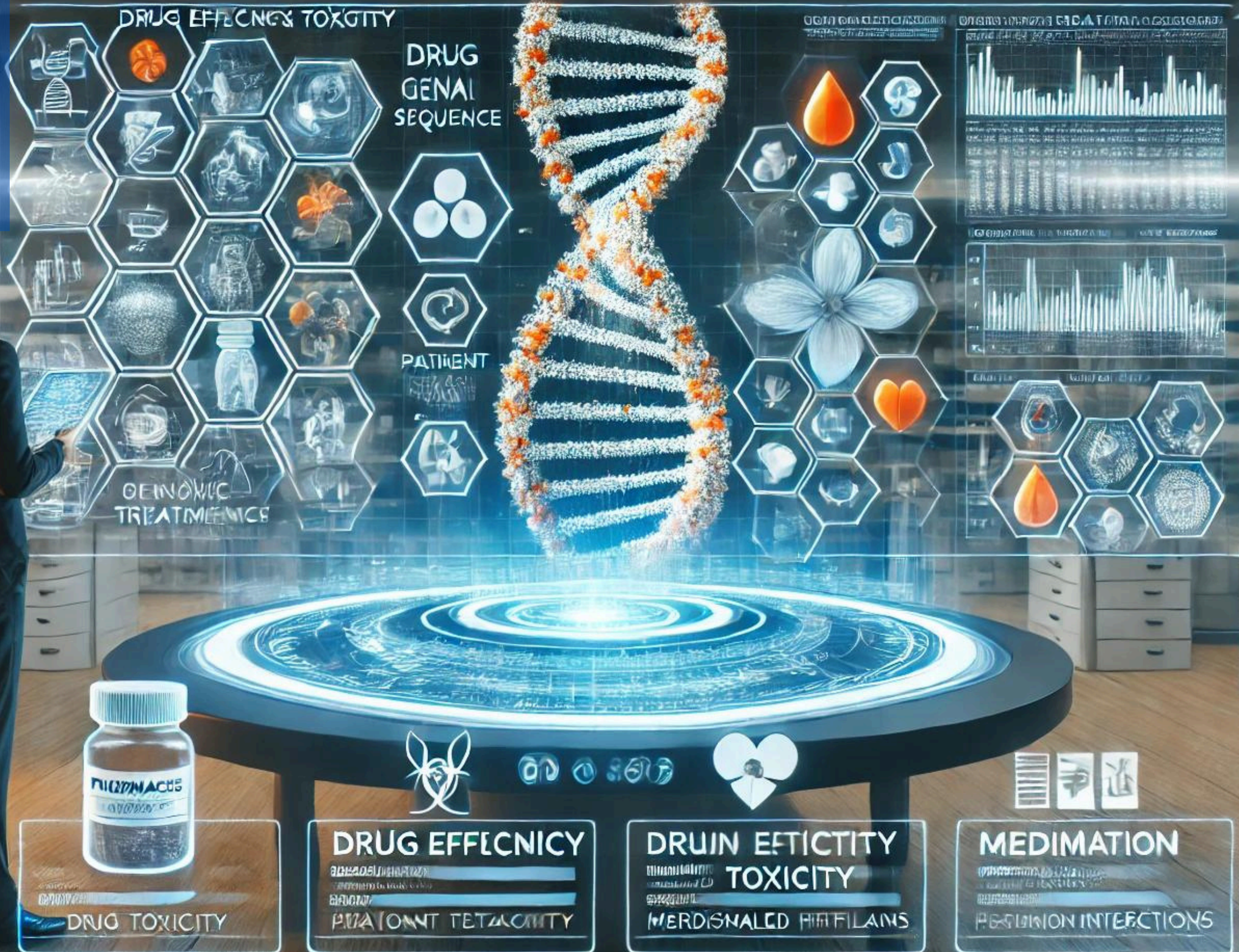
PRIVACY



KİŞİSELLEŞTİRİLMİŞ TEDAVİ VE HEKİM KARARLARI:

- GENETİK BİLGİLER VE TEDAVİ
- TEDAVİ ÖZELLEŞTİRME
- HASTA MEMNUNİYETİ

PHARMACOGENOMICS & PERSONALIZED MEDICINE



ECZACILARIN GENİŞLEYEN ROLÜ

IOT
PHARMACY

IOT

SMART PACKAGING

SMART PACKAGING

SORS
HUMIDITY
HUMIDITY
OPENING
OPENING

107

AS PRESCRIBED

TO THE PRESCRIPTION

AKILLI PAKETLEME VE İLAÇ İZLEME

- SENSÖRLER VE İZLEME
- GERÇEK ZAMANLI VERİ
- HASTA YÖNETİMİ



RFID Tags
& Sensors



ENVANter YÖNETİMİNDE IOT:



IOT

- OTOMATİK STOK KONTROLÜ
- ZAMANINDA YENİDEN SİPARİŞ
- ENTEGRASYON





BLOCKCHAIN TEKNOLOJİSİ VE ECZACILIK TEDARİK ZİNCİRİ

THE ROLE OF PHARMACIAL CARE



Personalized
Treatment



Chronic Disease
Management



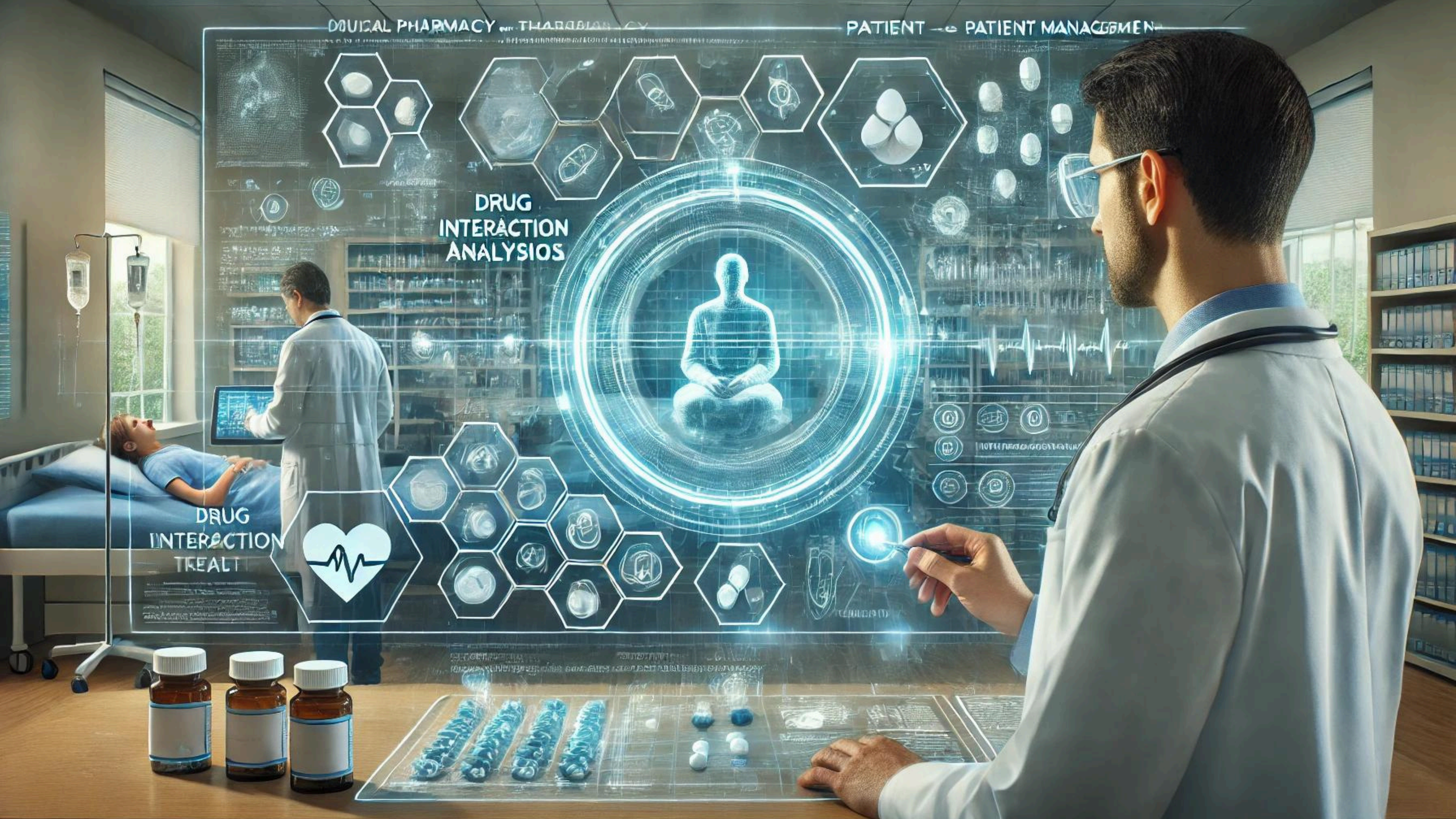
ECZACILARIN DEĞİŞEN ROLÜ

DRUG PHARMACY

PATIENT PATIENT MANAGEMENT

DRUG
INTERACTION
ANALYSIS

DRUG
INTERACTION
TREAT



DİJİTAL ECZANEDE ETİK HUSUSLAR

1. HASTA MAHREMİYETİ VE VERİ GÜVENLİĞİ:

- VERİ İHLALLERİ RISKİ
- GÜVENLİ VERİ DEPOLAMA
- DÜZENLEYİCİ UYUMLULUK
- SİBER GÜVENLİK ÖNLEMLERİ

2. YAPAY ZEKA VE ETİK KULLANIMI:

- VERİMLİLİK VE DOĞRULUK
- İNSAN DENETİMİ
- ETİK YÖNERGELER
- AÇIKLANABİLİR AI

3. DİJİTAL UÇURUM VE ERİŞİM EŞİTSİZLİĞİ:

- ERİŞİM ENGELLERİ
- MOBİL VE TELEECZANE HİZMETLERİ
- EĞİTİM VE DESTEK
- EŞİTLİK SAĞLAMA



DIJİTAL ECZANEDE GELECEKTEKİ TRENDLER

1. ÖNGÖRÜCÜ ANALİZLER VE KİŞİSELLEŞTİRİLMİŞ SAĞLIK:

- HASTALIK ÖNLEME
- ÖNLEYİCİ TEDBİRLER
- İLAÇ YÖNETİMİ

2. SANAL GERÇEKLIK (VR) İLE EĞİTİM

- ECZACI EĞİTİMİ
- HASTA EĞİTİMİ
- BECERİ KAZANIMI

3. ORTAYA ÇIKAN TEKNOLOJİLER VE ECZACILIĞIN GELECEĞİ:

- YAPAY ZEKÂ VE MAKİNE ÖĞRENİMİ
- GİYİLEBİLİR TEKNOLOJİLER
- VERİ ODAKLI BAKIM

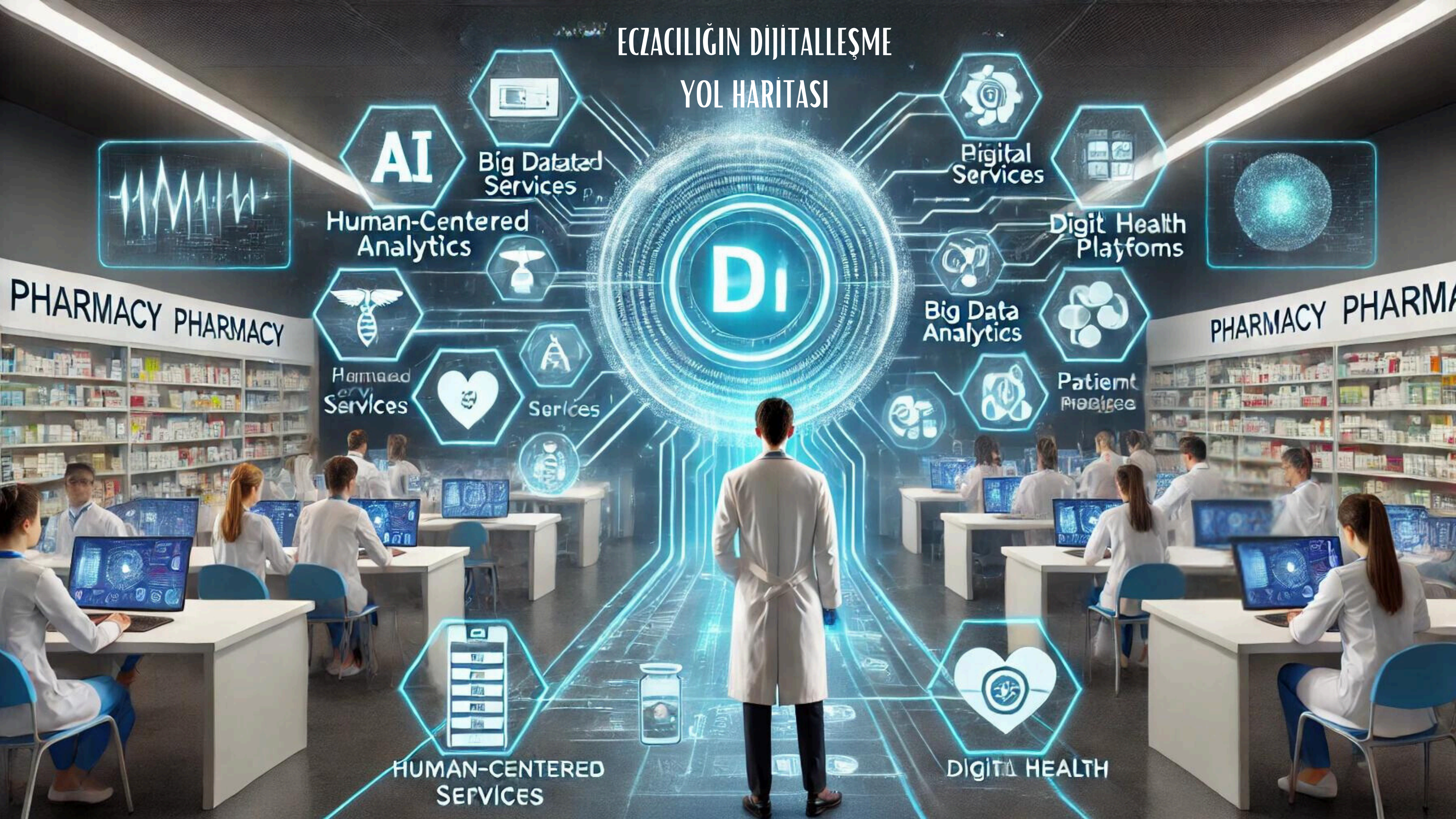


ADADESTIC

INTERDISCIPLINARY
APPROACH



ECZACILIĞIN DİJİTALLEŞME YOL HARİTASI



EVOLVING ROLE

NEW CAREER OPPORTUNITIES

PERSONALIZED MEDICINE
PHARMAGENOMICS

PERSONALIZED MEDICINE
Pharmacogenomics

Personalized

PERSONALIZED
A1
PHARMACOLOGICAL
MEDICINE

Telepharmacy
TELE-PHARMACY

PERSONALIZED
A1C
PHARMACOLOGICAL
MEDICINE

Personalized
Medicine

Telepharmacy

PHARMACISTS





PERSIKIBLE
MEDICINE
PRODUCTION
PRODUCTION



Personalized
Medicine
Production

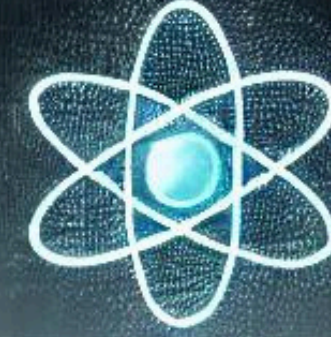


AI

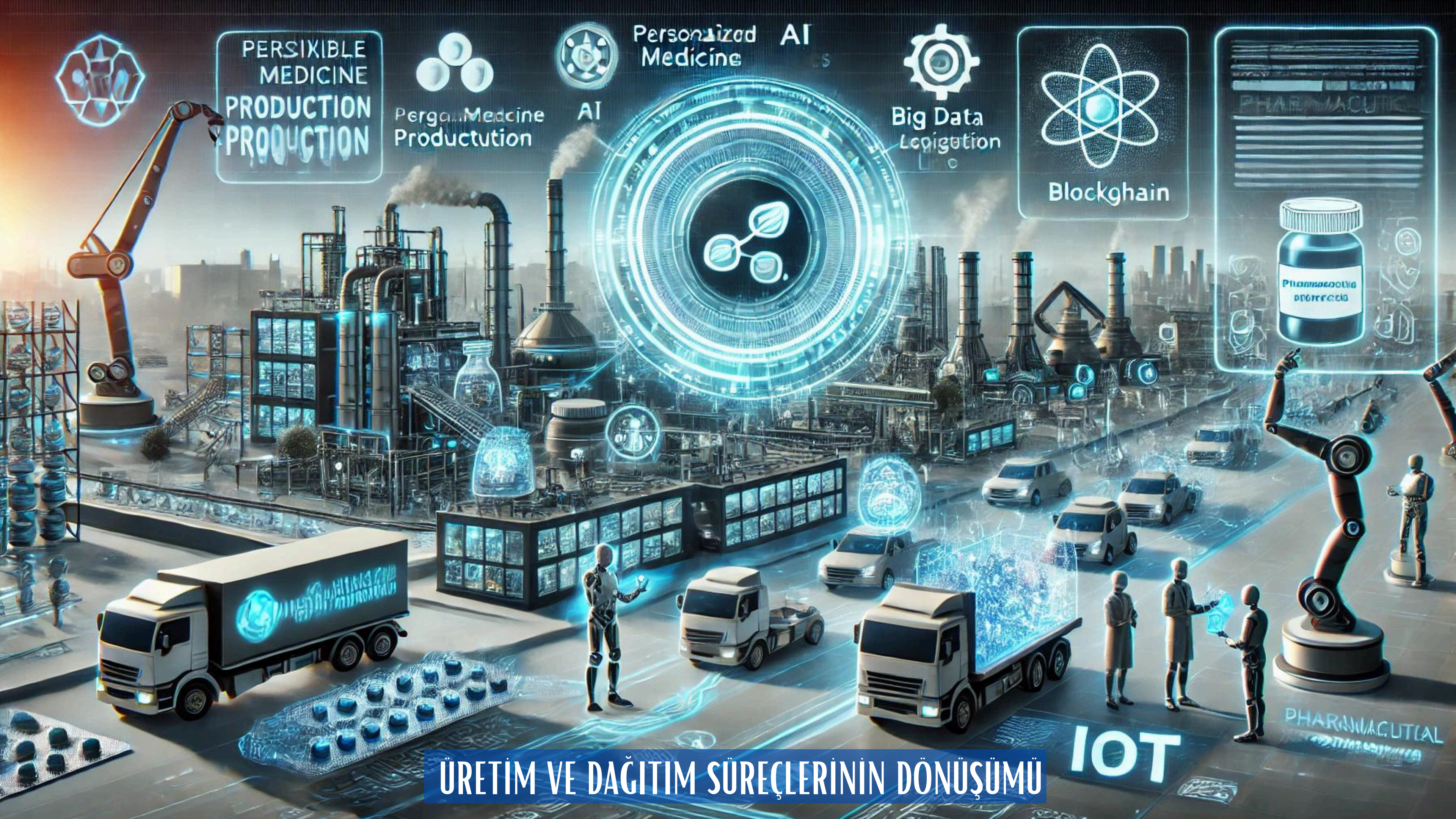
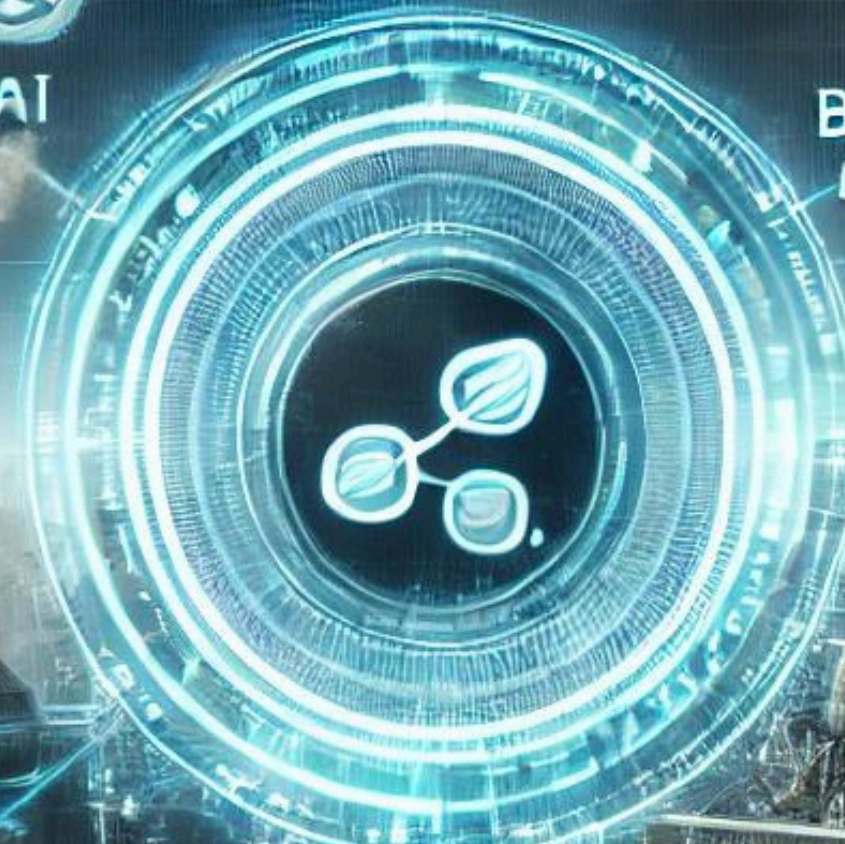
Personalized
Medicine
AI



Big Data
Legislation



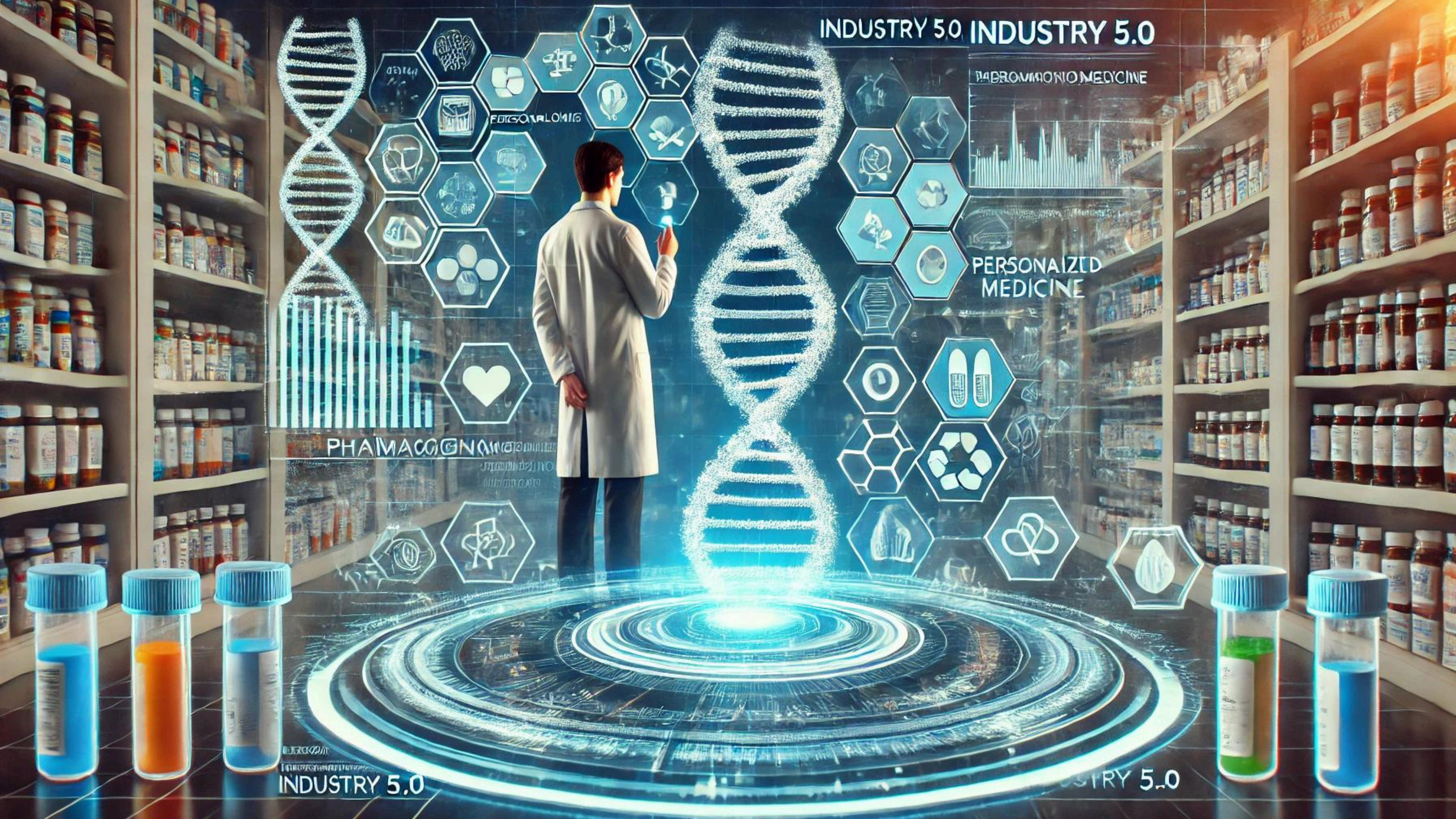
Blockchain



ÜRETİM VE DAĞITIM SÜREÇLERİNİN DÖNÜŞÜMÜ

IOT

PHARMACUTICAL
DISTRIBUTION



INDUSTRY 5.0 INDUSTRY 5.0

PHARMACONOMICS

PHARMACONOMICS

PERSONALIZED
MEDICINE

PHARMACONOMICS

INDUSTRY 5.0

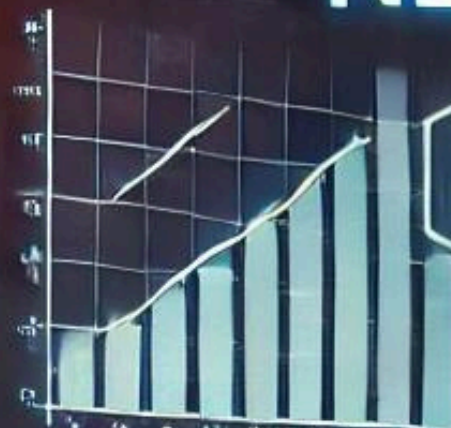
INDUSTRY 5.0

NEW INNOVATION MODELS

PHARMACO
DRUG
DEVELOPMENT



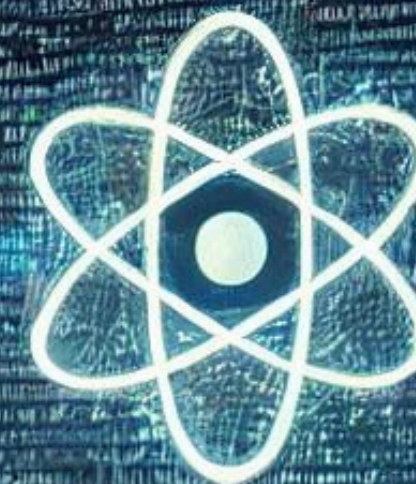
DRUG BIOLOGY



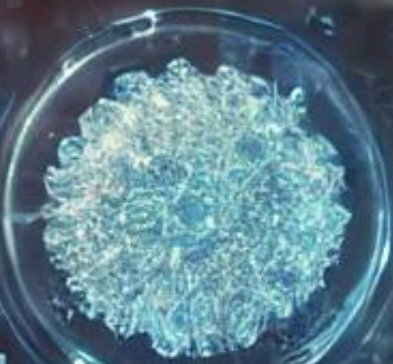
MACHINE LEARNING
AND DEVELOPMENT

FASTER
DRUG
DISCOVERY

DRUG
LEARNING



AI



DRUG BIOLOGY

DRUG

DESIGN



AI

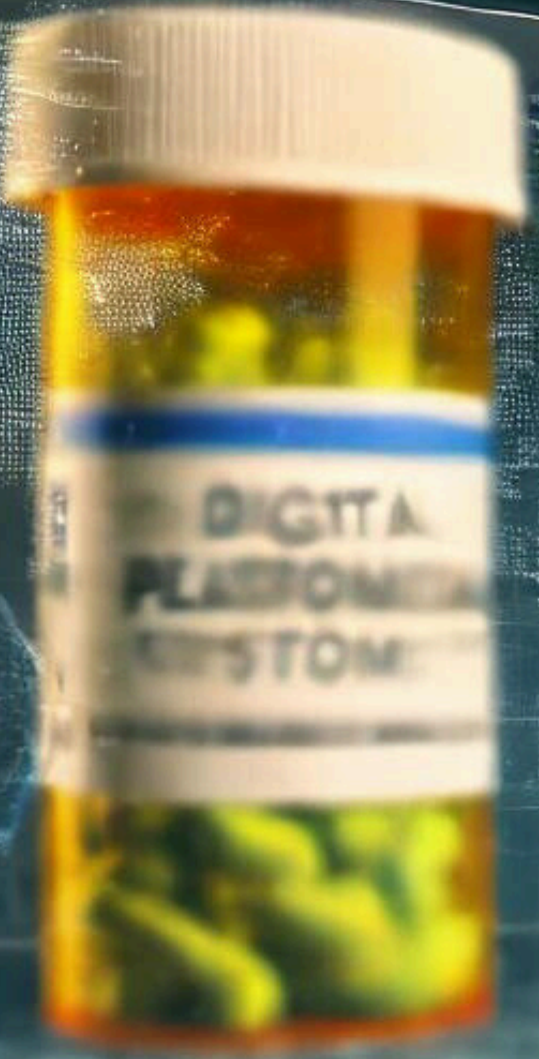
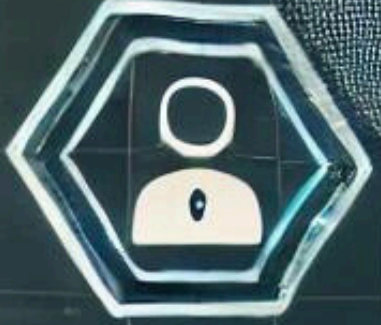


AI



AI

DIGITAL HEALTH



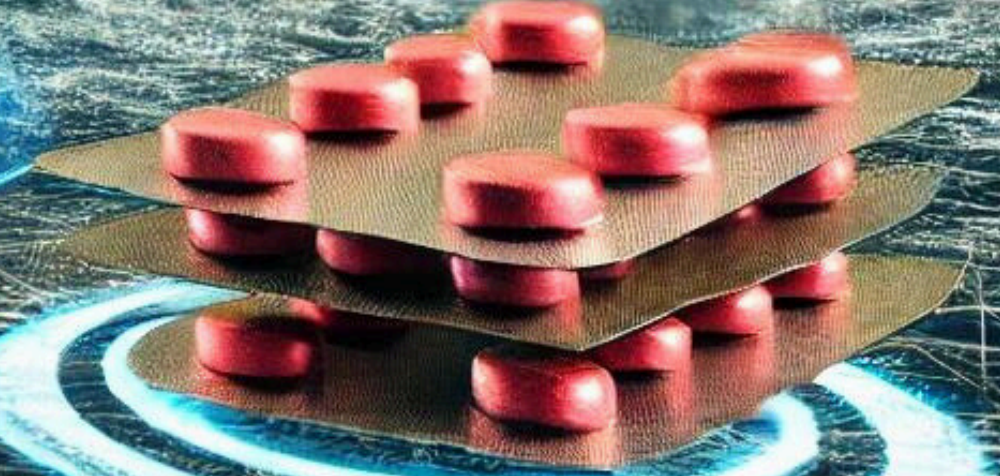
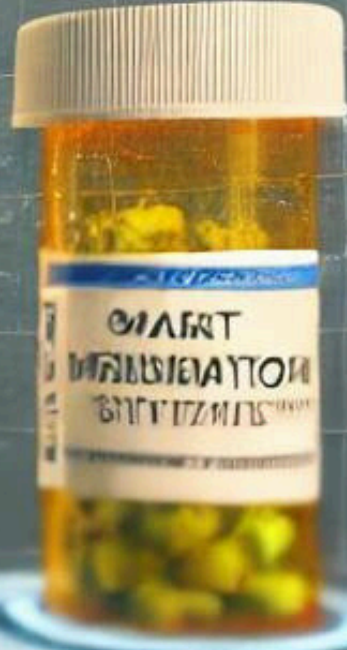
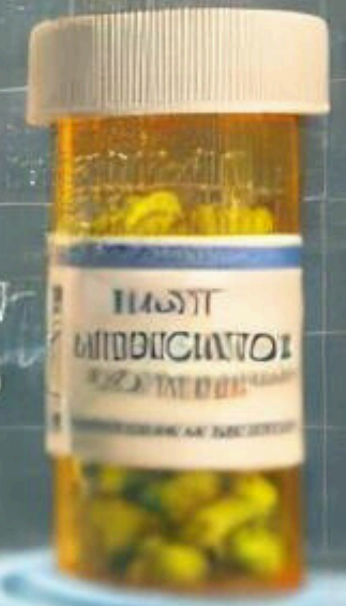
DIJİTAL SAĞLIK PLATFORMLARI
İLE ENTEGRASYON:



E-SAĞLIK VE TELE-TIP
AKILLI İLAÇ SİSTEMLERİ



SMART
MEDICATION
SYSTEMS



INDUSTRY 5.0

