

PAKISTAN ACADEMY OF ENGINEERING
37TH SYMPOSIUM ON AI IN PAKISTAN

IMPACT OF ARTIFICIAL INTELLIGENCE ON EMPLOYMENT IN PAKISTAN



TRANSFORMING TOMORROW AND TODAY

PRESENTED BY:

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SHAMSI





ABOUT ME



PROFESSOR AND DEAN FAST NUCES

- AI, ML, Big Data, and Cloud
- Authored :Big Data Systems
- 2400+ citations



CEO SYSLAB.AI

- ProctorParhai (Assessments)
- EyeconAI(AI-based anomaly detection)
- iParhai(AI-based learning)

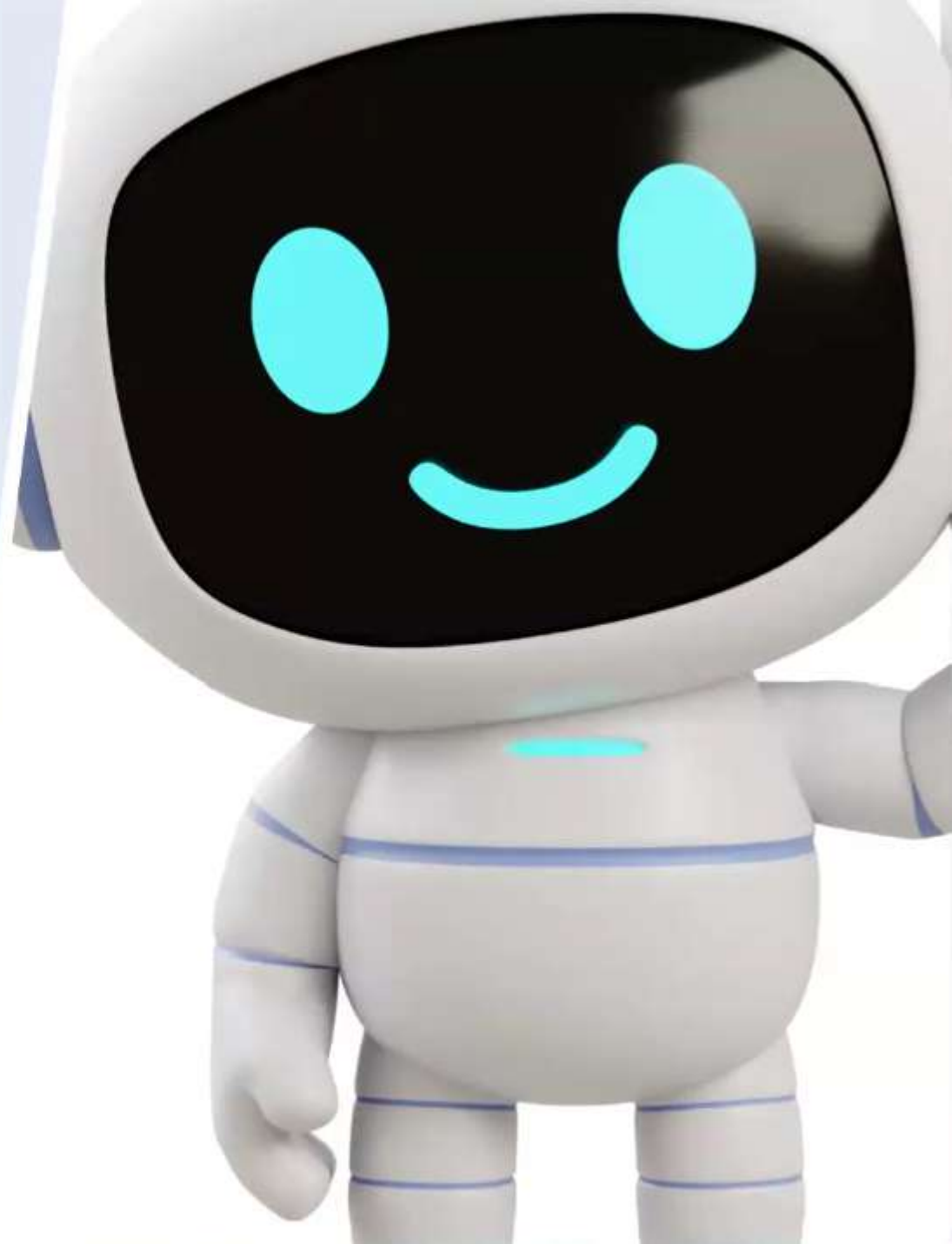


WILL AI TAKE
AWAY JOBS, OR
CREATE NEW
ONES?



WHAT IS ARTIFICIAL INTELLIGENCE?

- Machines that learn, adapt, and make decisions
- Examples: ChatGPT, self-driving cars, fraud detection



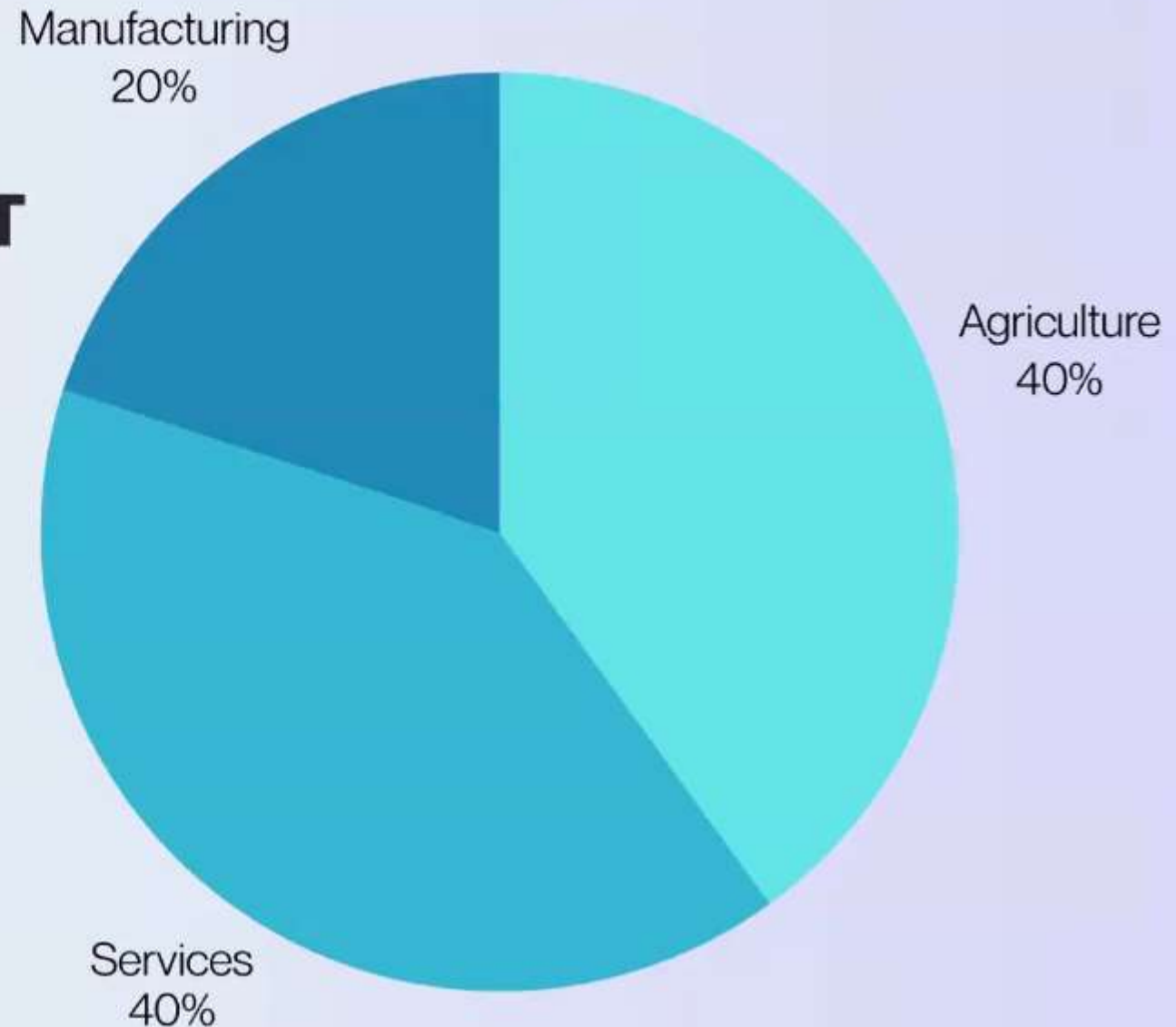
GLOBAL AI MOMENTUM

- AI adoption accelerating worldwide
- World Economic Forum: By 2030, 375M workers may need re-skilling
- New careers emerging every year



PAKISTAN'S EMPLOYMENT LANDSCAPE

- Youth = large population
- Employment Breakdown
- Informal Economy



CURRENT APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN PAKISTAN

01 AI AND FINTECH

02 AI IN ECOMMERCE

03 AI IN EGRICULTURE

04 AI IN EDUCATION

05 AI IN HEALTHCARE

06 AI I MANUFACTURING

AI IN FINTECH



01

CHATBOTS AND CUSTOMER
SUPPORT

02

FRAUD DETECTION

03

CREDIT RISK SCORING

AI IN ECOMMERCE



- 01 PRODUCT RECOMMENDATIONS

- 02 INVENTORY MANAGEMENT

- 03 LOGISTICS OPTIMIZATION

AI IN AGRICULTURE



CROP MONITORING VIA DRONES

SMART IRRIGATION

YIELD PREDICTION

PERSONALIZED LEARNING PATHS

AUTOMATED GRADING

EXAM MONITORING: PROCTORPARHAI

AI IN EDUCATION



DIAGNOSTIC IMAGING

TELEMEDICINE PLATFORMS

DRUG DISCOVERY

AI IN HEALTH CARE



QUALITY ASSURANCE

SAFETY CONTROL

PRECISION

AI IN MANUFACTURING



JOBS AT RISK (GLOBAL VIEW)

ROUTINE & REPETITIVE ROLES MOST VULNERABLE



DATA ENTRY



CLERICAL



TELEMARKETING

JOBS AT RISK (PAKISTAN)



**BPO/CALL
CENTERS**

**CLERICAL
WORK**



**ASSEMBLY LINE
MANUFACTURING**

BASIC ACCOUNTING



CASE STUDY: OUTSOURCING/ BPO



- CALL CENTER WORK AUTOMATED BY AI CHATBOTS
- PAKISTAN BPO SECTOR VULNERABLE
- BUT HIGHER-VALUE ANALYTICS ROLES EMERGING

CASE STUDY: BANKING



- AI FRAUD DETECTION → FEWER MANUAL CHECKS
- SHIFT FROM CLERKS → DATA ANALYSTS & COMPLIANCE OFFICERS
- LOAN APPROVALS

INFORMAL ECONOMY CHALLENGE



- MANY JOBS NOT DOCUMENTED
- AI ADOPTION MAY WIDEN URBAN-RURAL GAP
- DIGITAL LITERACY REMAINS LOW



EMPLOYMENT TRANSFORMATION & OPPORTUNITIES

JOBS BEING TRANSFORMED

- Teachers (AI tutors assist)
- Doctors (AI diagnostics support)
- Farmers (AI weather/crop insights)



NEW JOB CATEGORIES

- AI engineers, data scientists
- Prompt engineers
- AI ethicists, auditors



AI & URDU LANGUAGE MODELS

- Huge demand for local language AI
- Opportunities in NLP & dataset creation



GIG ECONOMY SHIFT

- Pakistani freelancers using AI tools
- Demand on Upwork/Fiverr for AI-powered services



AI + AGRICULTURE EXAMPLE

- AI soil sensors & weather forecasting
- Farmers increase yields



AI + HEALTHCARE EXAMPLE

- Radiology scans analyzed by AI
- Doctors get second opinion instantly



AI + PROGRAMMING

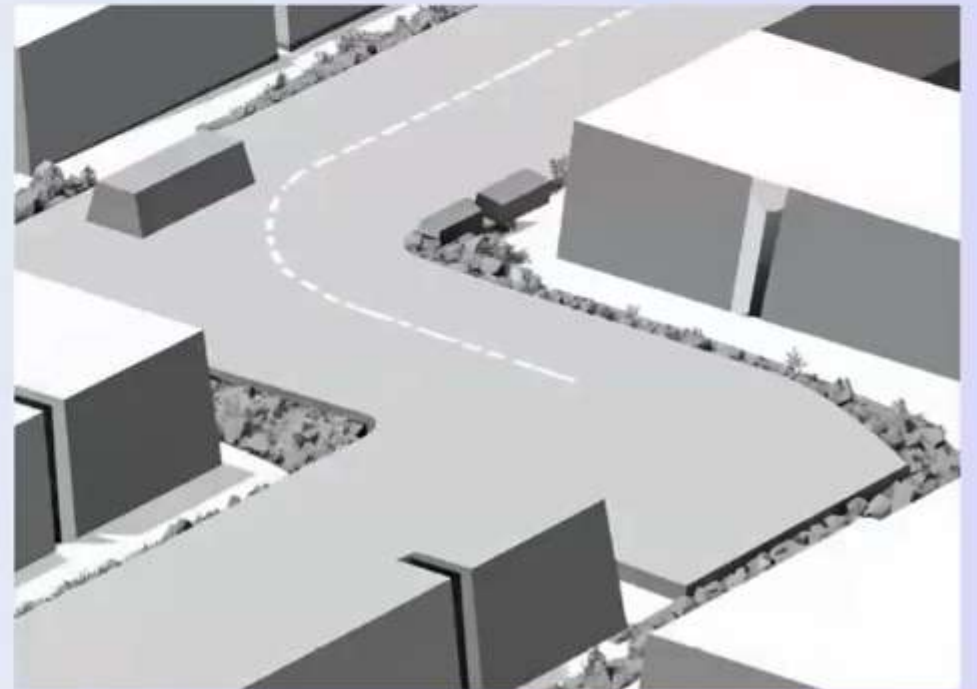
- Programmer using AI for development
- AI based software development and testing



KEY CHALLENGES



- Skills gap
- Brain drain
- Low R&D investment
- Limited policy framework





- Youth as digital workforce
- Startup ecosystem growing
- Global outsourcing shift

OPPORTUNITIES

EYECON AI

AI-based anomaly detection





POLICY & INSTITUTIONAL ROLE

- Reskilling & vocational training
- AI-friendly regulations
- Public-private partnerships



ROLE OF INDIVIDUALS



- Continuous learning mindset
- Hybrid skills (domain + digital + soft skills)
- Leverage online learning platforms

iparhai: **AI-based adaptive learning**

ProctorParhai: **Online Assessments**

AI based vigilance

AI-based Grading

AI-based feedback





Syslab.ai

- iParhai
- ProctorParhai
- EyeconAI



iParhai



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PROCTORPARHAI FEATURES

A comprehensive AI-powered
SaaS framework for conducting
assessments

AI-based Proctoring



AI-based Grading



AI-based Question Creation



AI-based Feedback





CREATED WITH
CAMTASIA



Syslab.ai

EYECON AI

www.eyeconai.com



THE FUTURE OF WORK

- Humans + AI = “Co-existence economy”

AI handles repetitive, humans lead with creativity & empathy



CLOSING THOUGHT & CALL TO ACTION

- AI will not replace humans. But humans using AI will replace those who don't.
- Call to action: Learn. Adapt. Innovate.





THANK YOU SO MUCH

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