Should Robots Be Allowed to Replace Humans in Jobs?

A Grade 9 Student's Perspective

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Introduction

What are Robots?

A robot is a machine that does tasks without the help of a person. Robots are designed to perform tasks for people and operate on their own.

Where are Robots Used Today?

- Manufacturing
- Healthcare
- Homes
- Warehouses
- Space Exploration
- Call Centers

Think About This

"Robots are no longer science fiction — they're taking real jobs."

Why Robots Are Replacing Humans

Cost Efficiency

- Robots are **2-10 times cheaper** than human labor
- No salaries, benefits, or breaks needed
- Lower long-term operational costs
- Reduced workplace injury expenses

Speed & Accuracy

- Perform tasks **much faster** than humans
- Higher precision and consistency
- Can work 24/7 without fatigue
- Fewer mistakes leading to less waste

Dangerous Tasks

- **Bomb disposal** and explosive handling
- Nuclear plant maintenance and decontamination
- Deep-sea exploration and underwater repairs
- Working with hazardous chemicals and materials

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Advantages of Robots in Jobs

Higher Productivity

- Can work **24/7 without breaks**
- Increased production efficiency
- No fatigue or boredom
- Consistent output quality
- Full shifts without interruption

Reduced Workplace Injuries

- For every robot per 1,000 workers, injury rates **decrease by 1.2 per 100 workers**
- Removes humans from dangerous tasks
- Reduces repetitive strain injuries
- Lower workers' compensation costs

Extreme Conditions

- **Space exploration** and deep-sea operations
- Handling radioactive materials
- Working in extreme temperatures
- Functioning in contaminated environments
- Operating in high-pressure situations

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Disadvantages of Robots in Jobs

Job Losses

- For every robot per 1,000 workers, **400,000 jobs lost** in the US
- Wages decline by 0.42%
- Employment-to-population ratio decreases
- 1.7 million manufacturing jobs lost worldwide since 2000

No Creativity/Empathy

- Lack **human intuition** and emotional understanding
- Cannot think creatively or solve unexpected problems
- No ability to understand complex social situations
- Cannot replicate human emotional intelligence

Expensive to Maintain

- Annual maintenance costs: **5-12%** of purchase price
- High initial investment ($25K - $500K+)
- Requires specialized technicians for repairs
- Additional costs for software updates and training

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Real-Life Examples

Car Manufacturing Robots

- Used for **welding, painting, assembly**
- Major companies:
  - BMW
  - Ford
- Six-axis robots for precise assembly
- UR10 robots for engine maintenance
- Increased production speed and consistency

AI Chatbots in Call Centers

- **92%** of customer service leaders report improved response times
- By 2025, AI will handle most routine tasks
- Common uses:
  - FAQs
  - Data Entry
  - Account Updates
- 24/7 customer support availability

Surgical Robots in Hospitals

- **da Vinci Surgical System** for precise operations
- Common procedures:
  - Appendectomy
  - Hysterectomy
  - Gallbladder Removal
- Smaller incisions and faster recovery
- Enhanced precision for complex surgeries

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Balanced Approach

Robots in Repetitive/Dangerous Tasks

- Handle **monotonous work** without fatigue
- Take on hazardous environments
- Perfect for predictable, repeatable processes
- Examples:
  - Assembly Lines
  - Nuclear Work
  - Mining

Humans in Creative & Decision-Making Roles

- Excel in areas requiring **intuition and creativity**
- Essential for emotional intelligence
- Make complex ethical judgments
- Examples:
  - Design
  - Strategy
  - Leadership

"Cobots" = Humans + Robots

- **Collaborative robots** work alongside humans
- Share workspace and tasks safely
- Enhance productivity with human oversight
- Features:
  - Easy Programming
  - Safety Sensors
  - Flexibility

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Ethical Concerns

Fairness of Replacing Workers

- Automation reduced wages of less-educated workers by **8.8%**
- Contributed to **50-70%** of wage inequality growth
- Workers face financial hardship and reduced self-esteem
- Disproportionate impact on vulnerable populations

Responsibility for Robot Mistakes

- Liability issues when robots cause harm
- Potential responsible parties: **Manufacturers** **Owners** **Programmers**
- Complex legal frameworks needed
- Case-by-case determination of responsibility

Impact on Income Inequality

- Robot density increases **exacerbate wealth inequality**
- Lower-wage workers affected more severely
- Widening gap between skilled and unskilled labor
- Need for policies to address economic disparities

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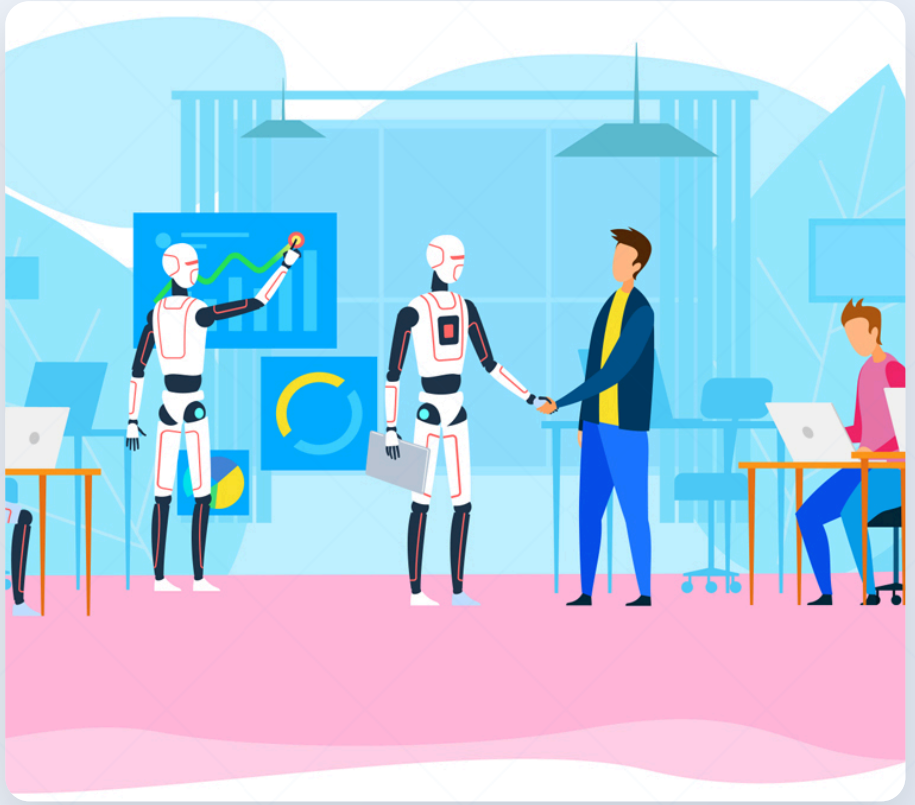
Conclusion

Main Point

Robots should assist, not replace humans entirely

Final Thought

> *Robots can work, but humans make the world worth working for.*



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