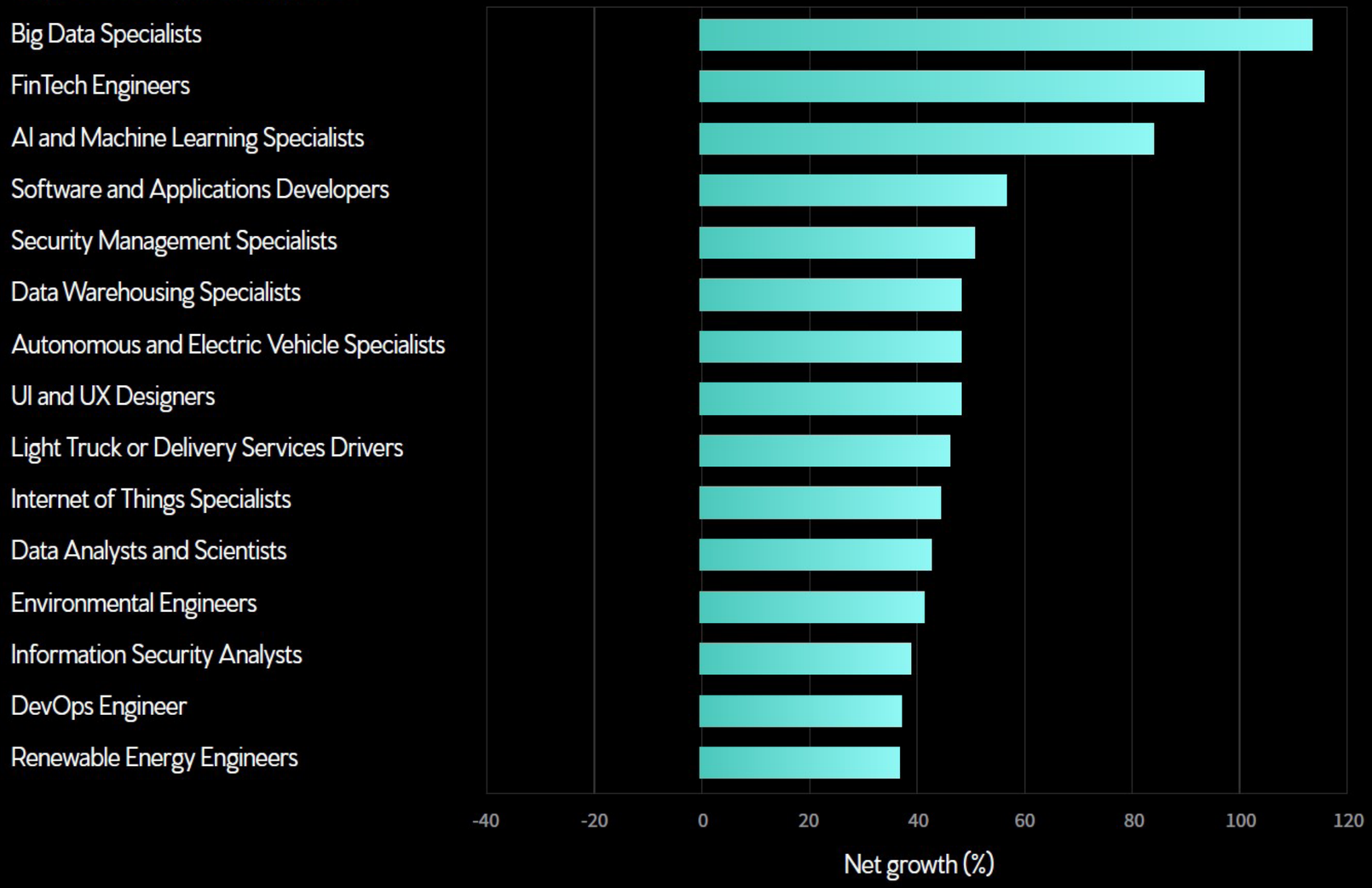
TREND REPORT - PRESENTATION

The future of hiring – AI Machine Learning in recruitment selection

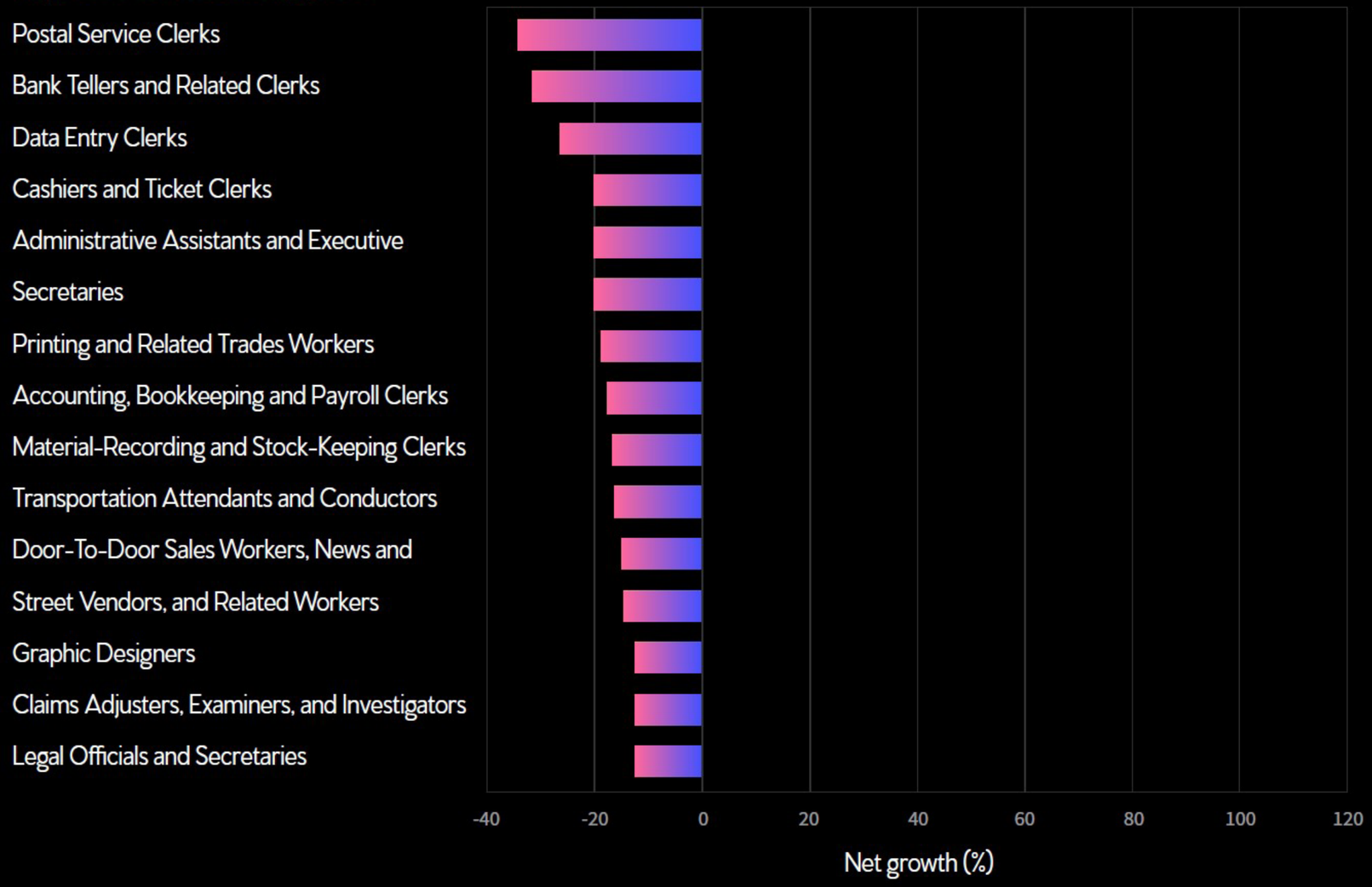
by 2030, 170 million new jobs will be created, while 92 million jobs will be displaced.

Top fastest growing jobs



Source:World Economic Forum, Future of Jobs Survey

Top fastest declining jobs



Source:World Economic Forum, Future of Jobs Survey

AI can identify transferable skills in candidates from diverse backgrounds, effectively bridging the gap between available positions and suitable talent.

Impact of AI on recruitment

1. **Faster & more efficient hiring**
AI automates tedious tasks like resume screening, interview scheduling, and candidate matching, making hiring much faster and more efficient.

2. **Shift to skill-based hiring**
Traditional hiring based on degrees and job titles is shifting toward a more skill-based approach. AI helps assess actual competencies rather than just credentials.

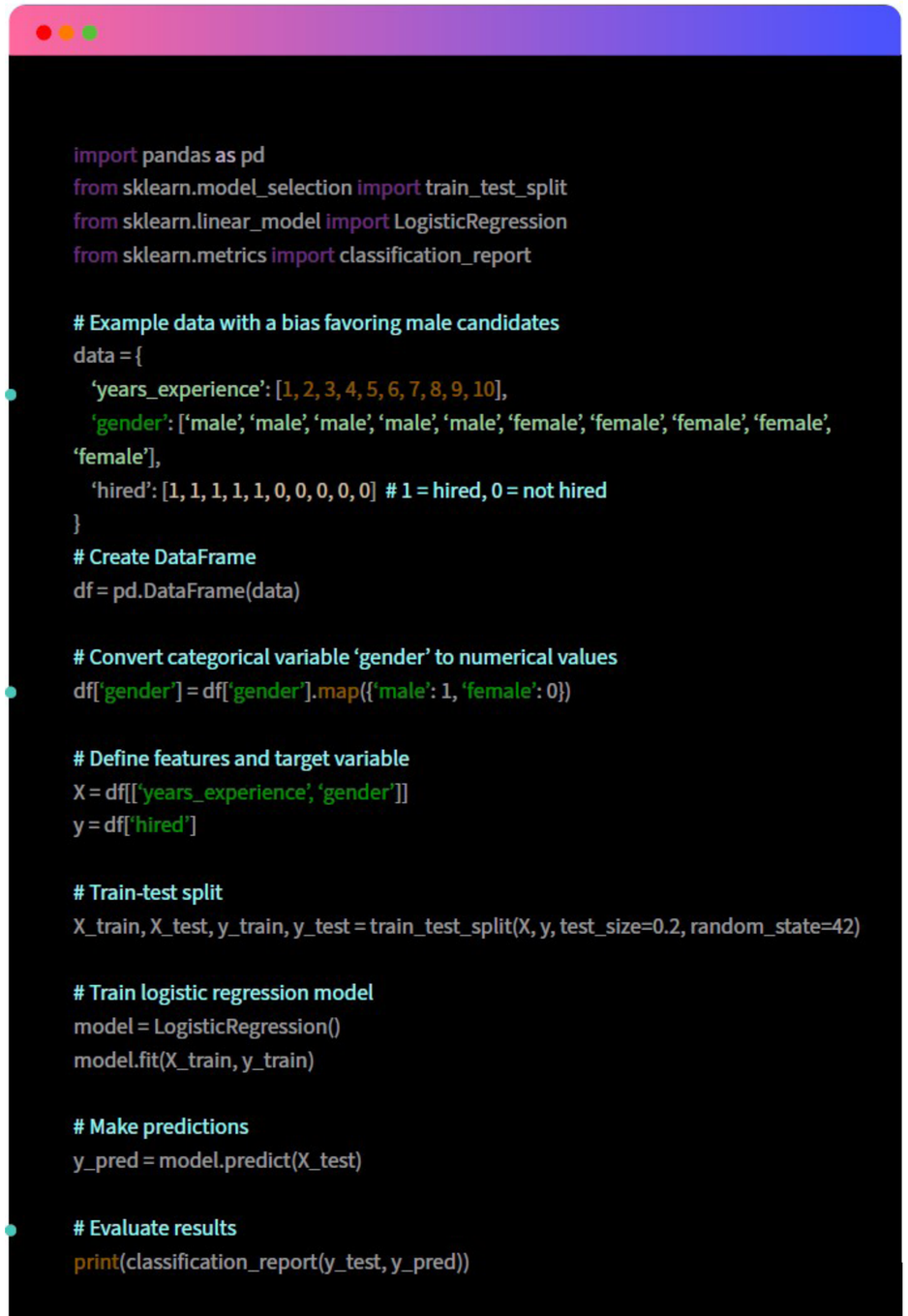
3. **Enhancing diversity & inclusion**
When implemented correctly, AI can help create fairer hiring processes by reducing human biases. However, as we will see, this is not always the case.

Unilever has leveraged AI to streamline its hiring process, reducing the time to fill positions from four months to just four weeks, resulting in a 75% decrease in hiring time.

Source: wikipedia.com

Benefits of AI	Share of respondents
Saves time	67%
Removes human bias	43%
Delivers best candidate matches	31%
Saves money	30%

Source: demandsage.com



```
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LogisticRegression
from sklearn.metrics import classification_report

# Example data with a bias favoring male candidates
data = {
  'years_experience': [1, 2, 3, 4, 5, 6, 7, 8, 9, 10],
  'gender': ['male', 'male', 'male', 'male', 'male', 'female', 'female', 'female', 'female',
'female'],
  'hired': [1, 1, 1, 1, 1, 0, 0, 0, 0, 0]  # 1 = hired, 0 = not hired
}
# Create DataFrame
df = pd.DataFrame(data)

# Convert categorical variable 'gender' to numerical values
df['gender'] = df['gender'].map({'male': 1, 'female': 0})

# Define features and target variable
X = df[['years_experience', 'gender']]
y = df['hired']

# Train-test split
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)

# Train logistic regression model
model = LogisticRegression()
model.fit(X_train, y_train)

# Make predictions
y_pred = model.predict(X_test)

# Evaluate results
print(classification_report(y_test, y_pred))
```

Threats & challenges

1. AI bias in hiring

One major concern is bias in AI models. If an AI system is trained on biased historical data, it can reinforce discrimination instead of reducing it. A well-known example is **Amazon's AI hiring tool, which unintentionally penalized female applicants.**

2. Lack of transparency 'Black boxes'

Another challenge is the lack of transparency. Many AI-driven hiring tools function as 'black boxes,' meaning employers and candidates don't fully understand how hiring decisions are made.

3. Legal & ethical compliance

AI in recruitment falls under strict regulations like the EU AI Act and GDPR, which classify AI-based hiring tools as 'high risk.' Companies must ensure compliance to avoid legal and ethical violations.

FAVORED DEMOGRAPHICS

“If past recruitment practices favored certain demographics, the machine learning model might continue this trend, disadvantaging other groups.”

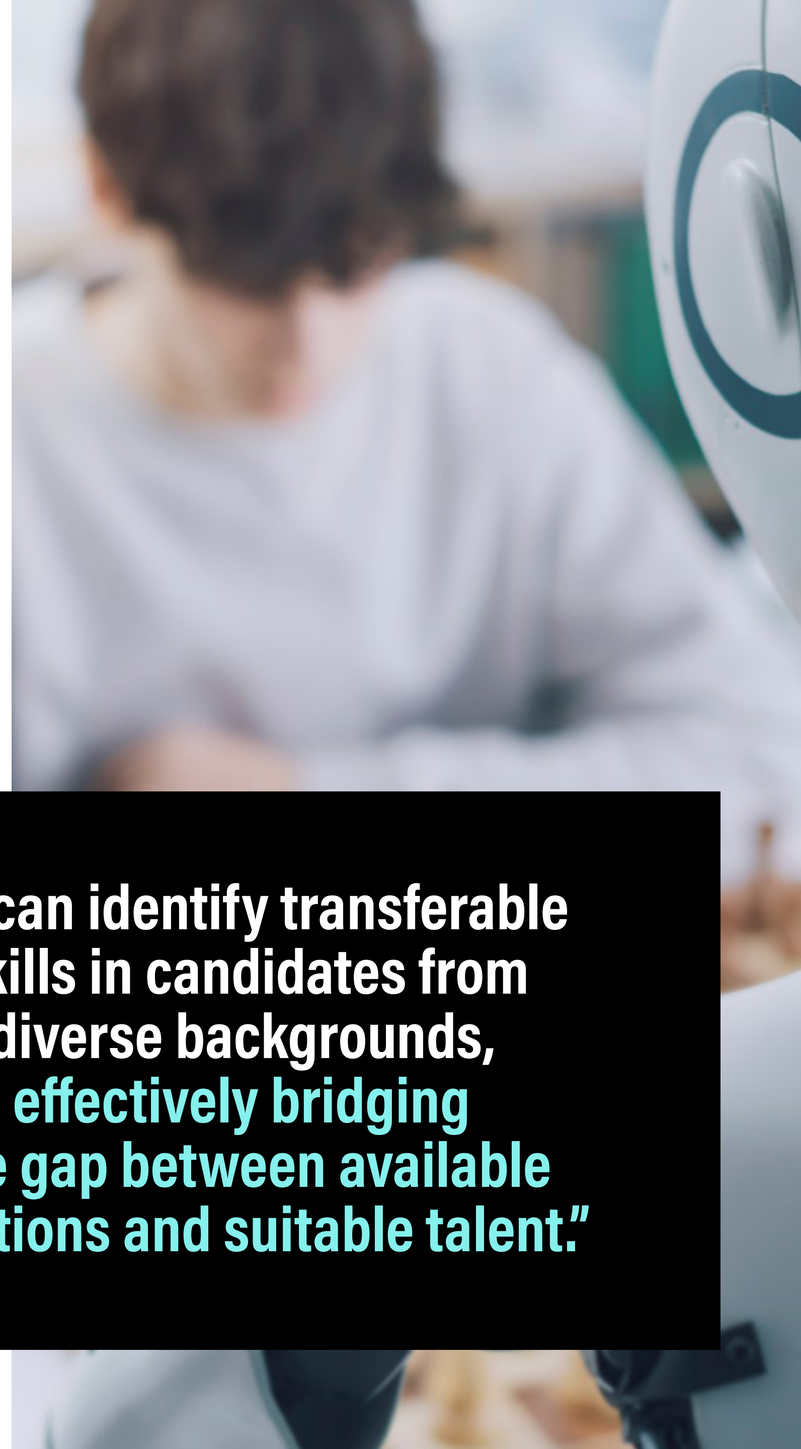
Source: Geeks for Geeks

Opportunities for Improvement

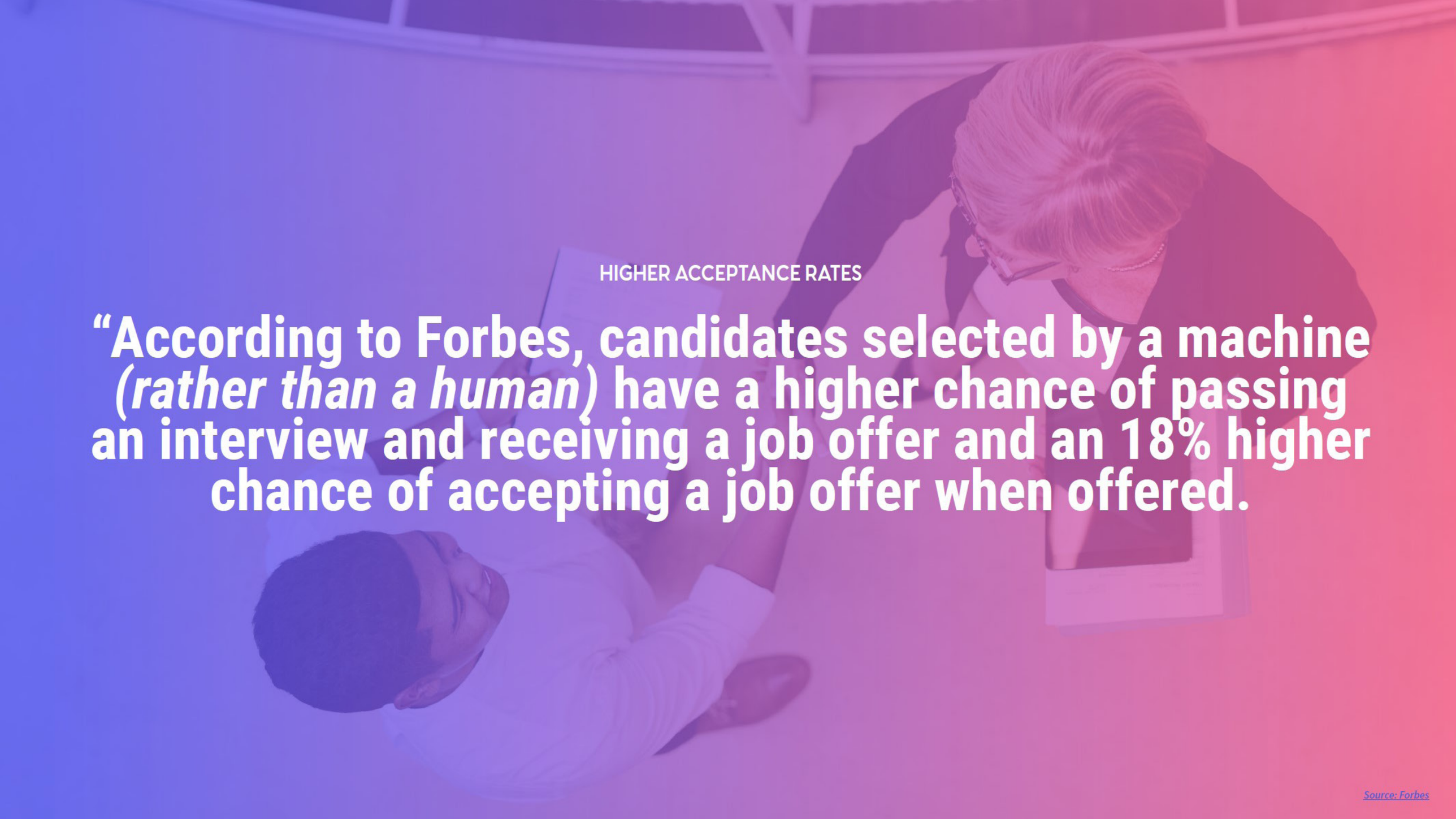
1. **Bridging skill gaps**
   AI helps companies match candidates based on skills rather than experience, which can help address labor shortages.

2. **Supporting workforce planning**
   Predictive analytics allow businesses to optimize workforce planning by forecasting talent needs and improving retention strategies.

3. **Enhancing candidate experience**
   AI chatbots and virtual assistants streamline the hiring process, providing instant responses and improving engagement with job seekers.



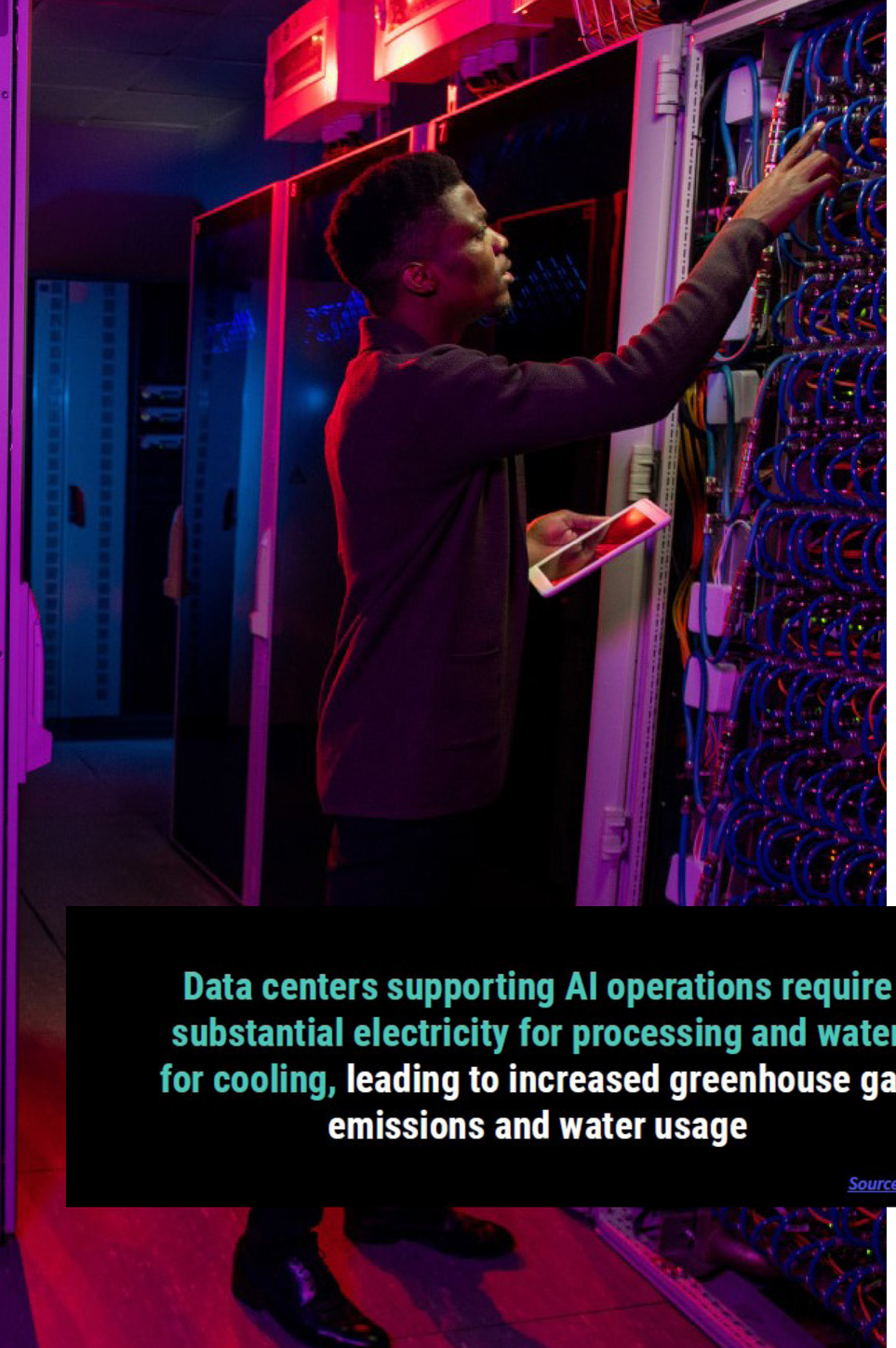
> **"AI can identify transferable skills in candidates from diverse backgrounds, effectively bridging the gap between available positions and suitable talent."**



HIGHER ACCEPTANCE RATES

“According to Forbes, candidates selected by a machine *(rather than a human)* have a higher chance of passing an interview and receiving a job offer and an 18% higher chance of accepting a job offer when offered.

Source: Forbes



Environmental Concerns

1. **High energy consumption data centers**

AI models require extensive computational power, increasing energy consumption and carbon emissions from data centers

Organizations must prioritize energy-efficient AI models and green data centers to minimize environmental impact.

2. **Reduced paper waste & travel emissions**

On the positive side, AI helps reduce paper waste and unnecessary travel for in-person interviews, contributing to sustainability efforts.

Key Recommendations

1. **Implement bias mitigation strategies**
   Companies should audit AI models for fairness and continuously refine algorithms to prevent discrimination.

2. **Companies should audit AI models for fairness and continuously refine algorithms to prevent discrimination.**
   AI hiring decisions must be explainable so candidates and employers understand why a certain candidate was selected or rejected.

3. **Align with legal regulations**
   Organizations must comply with laws such as the EU AI Act and GDPR to ensure ethical AI usage.

4. **Maintain human oversight**
   Finally, AI should support—*not replace*—human decision-making. Recruiters must have the final say to ensure fair and balanced hiring.

Questions?