



HR-Tech Innovation Challenge

Presented by:

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Deployed Model API Endpoint:

<https://risk-model-app-12345.blueriver-19dcaa87.eastus2.azurecontainerapps.io/predict>

Task 1 – Resume Screening Problem & Solution

The Challenge

Manual Inefficiency: HR teams review hundreds of resumes manually

Inconsistent Evaluation: Different reviewers, different standards

Missed Talent: Good candidates overlooked due to formatting/keywords

No Transparency: Unclear scoring and decision rationale

AI-Powered Solution

Text Extraction → Gemini AI Analysis → Smart Scoring → Hiring Recommendations

Converts unstructured resumes into structured JSON data

Evidence-based skill scoring (1-10 scale)

Automated categorization: HIRE (≥75%) | MAYBE (60–74%) | REJECT (<60%)

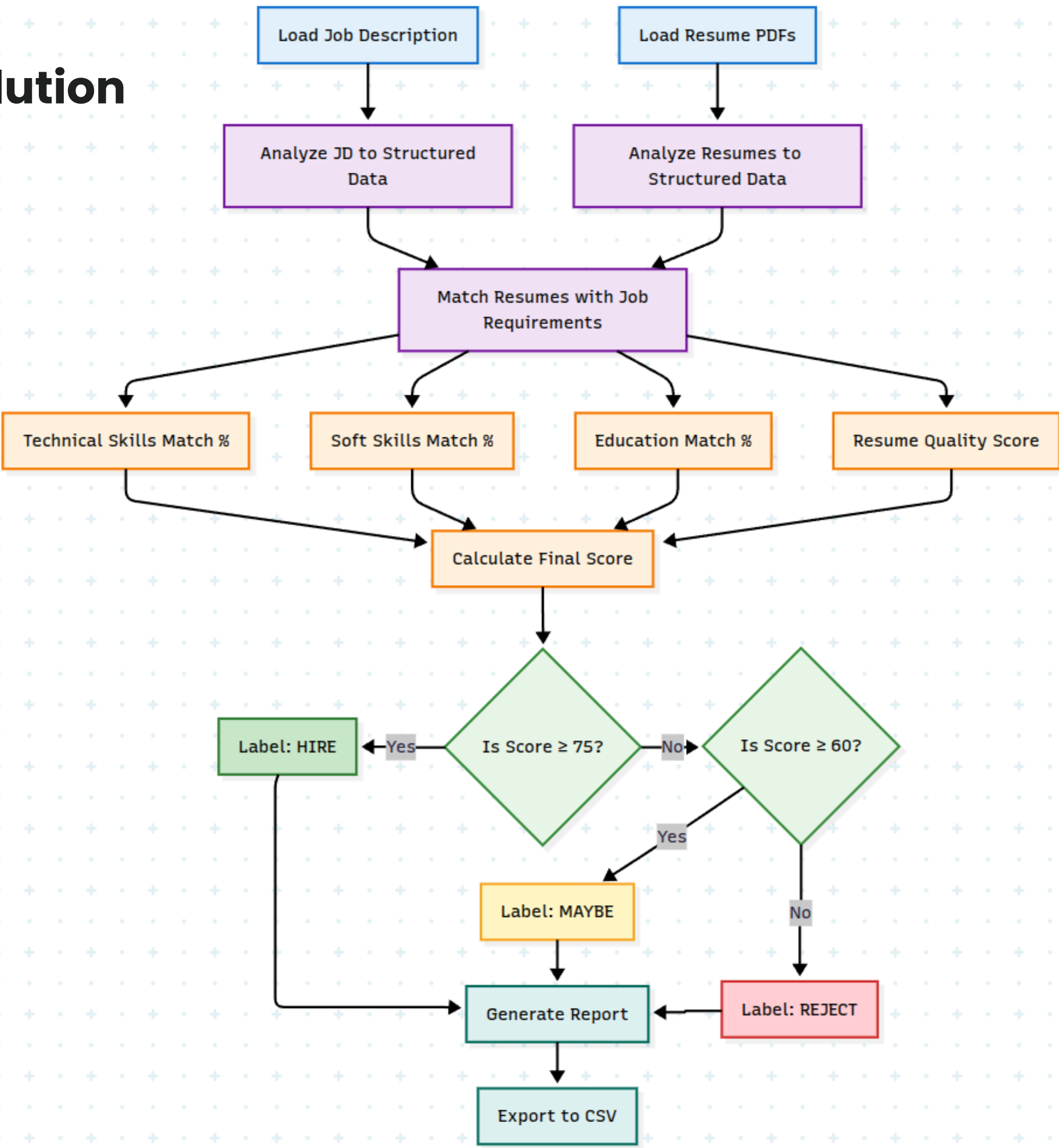
Task 1 – Resume Screening Problem & Solution

Key Features

- Evidence-Based skill evaluation, not keyword-based
- Fuzzy Matching handles synonyms & abbreviations
- Bonus Logic: +3 for mentorship, +4 for hackathon org.
- Batch Mode: 90% fewer API calls with caching

Advanced Logic

- Consistent skill-token mapping
- JD-aware context retention across analysis



Task 1 – Resume Screening Problem & Solution | Business Impact

Operational Efficiency & Scalability

Operational Efficiency

- 90% Time Reduction in resume screening
- Works 24/7, eliminating human fatigue
- Handles hundreds of resumes simultaneously

Scalability

- Batch Mode for campus or mass hiring drives
- Flexible Deployment: CSV for HR teams, API for enterprise integration

Fairness, Consistency & Transparency

Consistent & Fair Evaluation

- Bias-Free: Uniform scoring across all resumes
- Evidence-Based: Skills scored based on actual project usage

Transparency & Trust

- Clear scoring + reasoning → better hiring decisions
- Audit-Ready: Traceable scoring logic for HR reviews

Business ROI

Return on Investment

- Lower Cost per Hire: Reduces manual effort or outsourcing needs
- Faster Time-to-Hire: Shortlists qualified candidates instantly

Strategic Impact

- Enables data-driven hiring
- Improves candidate experience with consistent, quick feedback

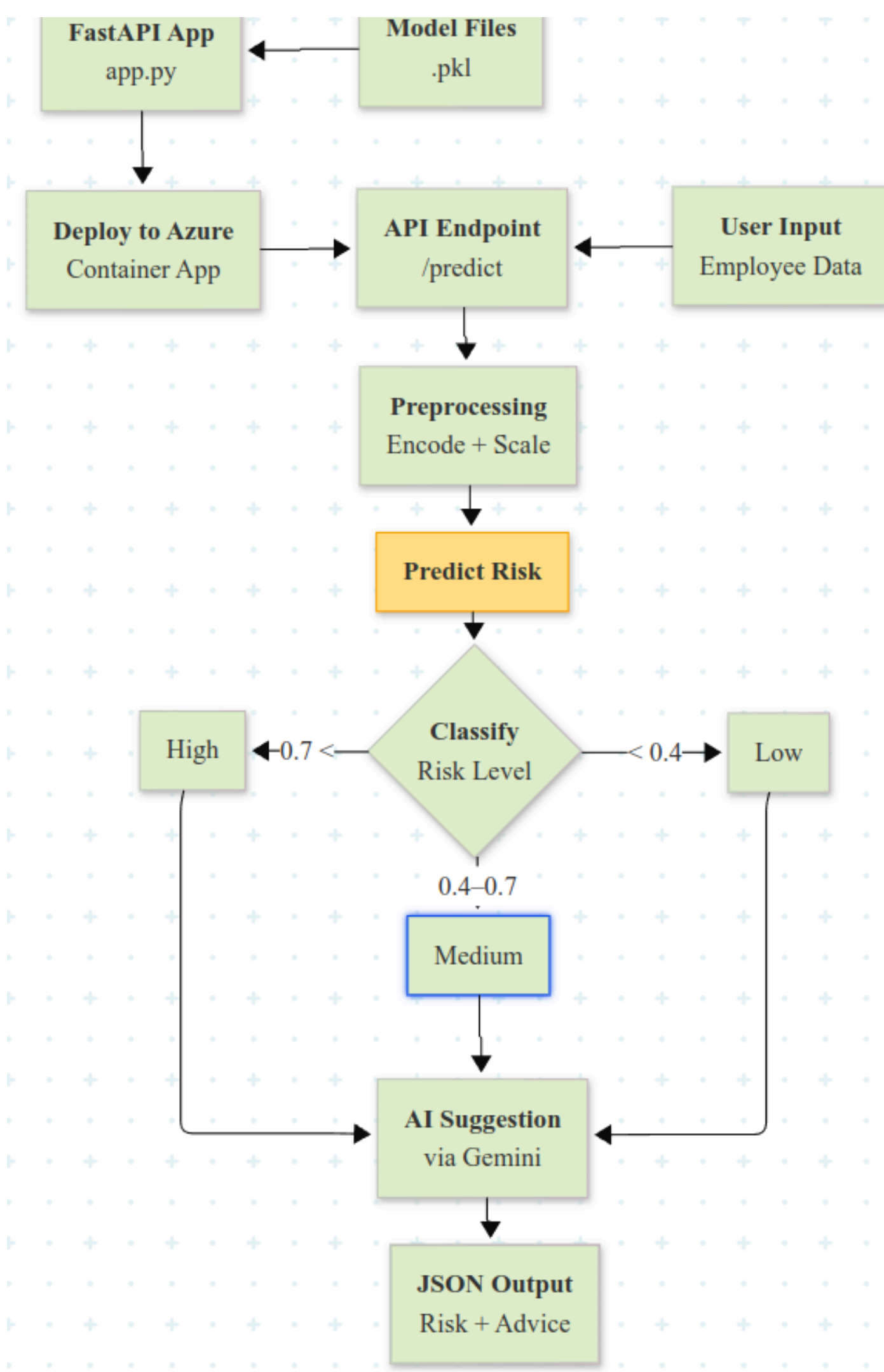
Task 2 – Attrition Prediction Problem & Solution

The Problem

- **Missed Emotional Signals:** Surveys and feedback often ignored in traditional models
- **Reactive HR Measures:** HR reacts only after an employee decides to leave
- **One-size-fits-all:** Generic strategies fail to address individual reasons for attrition

Our Hybrid AI Solution

- **Hybrid Model:** Combines structured data with sentiment analysis from unstructured text
- **AI Recommendations:** Gemini AI suggests tailored strategies for each at-risk employee
- **Deployed via Azure:** FastAPI + autoscaling + API integration for real-time usage



Task 2 – Attrition Prediction Problem & Solution | Business Impact

Proactive Retention Strategy

- Identify high-risk employees **before** they resign
- Enables early, data-driven intervention
- Shift from **reaction** to **prevention**

Tailored Action Plans at Scale

- AI-generated strategies based on **individual feedback** and metrics
- HR can apply **personalized retention efforts** efficiently
- Boosts **employee engagement**, morale, and loyalty

Operational Efficiency

- Eliminates guesswork in attrition risk analysis
- Reduces manual workload for HR teams
- Helps prioritize high-risk cases with **clear reasoning**

Cost Reduction

- Decreases cost of hiring and onboarding replacements
- Lowers productivity loss from unexpected exits
- Savings per retained employee

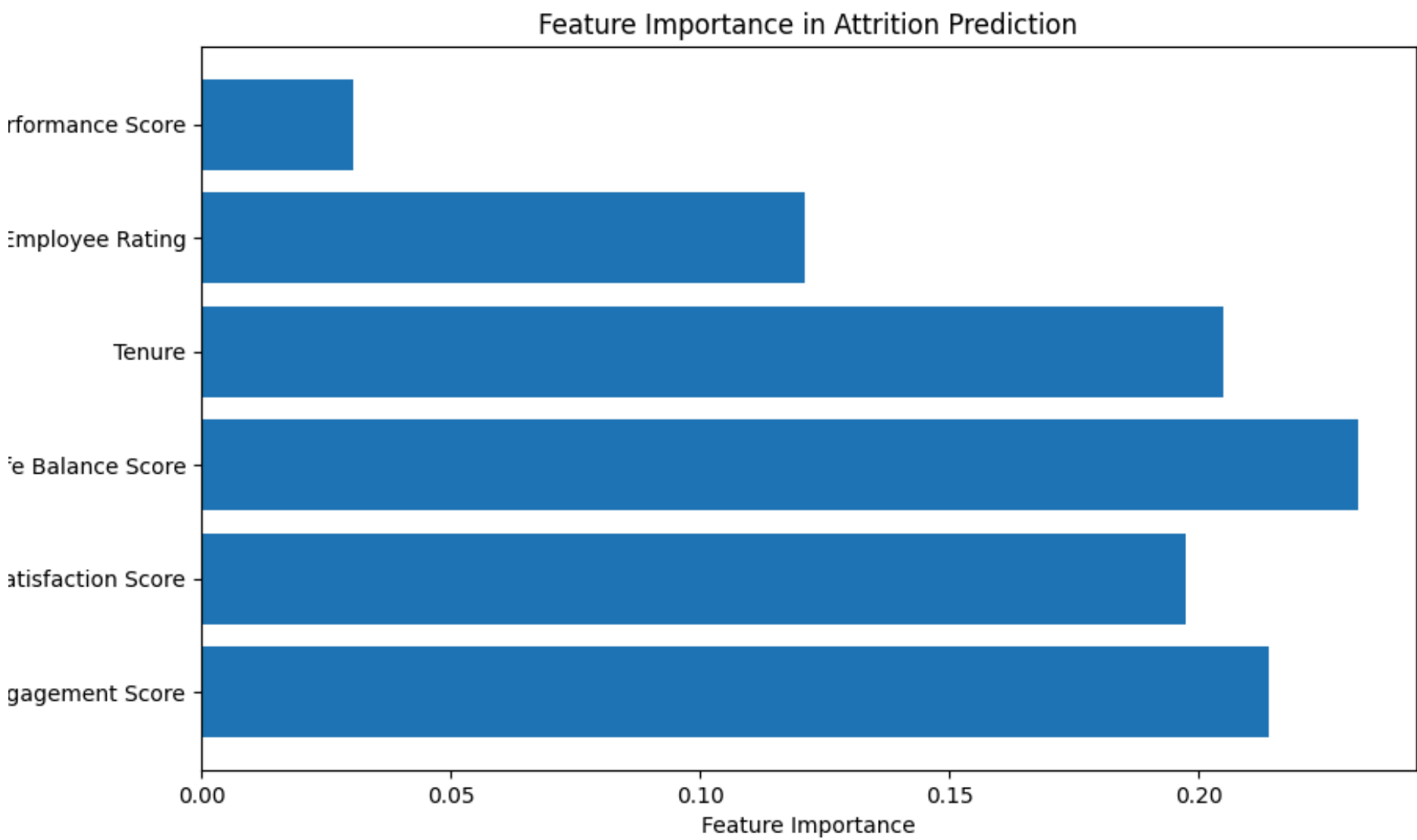
Strategic Workforce Planning

- Clear visibility into attrition trends and risk clusters
- Supports smarter **headcount forecasting** and **succession planning**

Task 2 – Attrition Prediction Problem & Solution | Deployment and Results

```
risk-model-app-12345.x +
https://risk-model-app-12345.blueriver-19dcaa87.eastus2.azurecontainerapps.io/health
Pretty print
{"status": "ok"}
```

Health check for Api Endpoint deployed on Azure AI Studio :
<https://risk-model-app-12345.blueriver-19dcaa87.eastus2.azurecontainerapps.io/predict>



Model Performance Comparison			
Metric	Random Forest	Gradient Boosting	Logistic Regression
CV AUC Mean	0.9426	0.9431	0.5616
CV AUC Std	0.0074	0.0075	0.0167
Accuracy	0.83	0.833	0.538
Precision	0.245	0.152	0.138
Recall	0.156	0.065	0.494
F1 Score	0.190	0.091	0.215
Final AUC Score	0.5544	0.5256	0.5541