# FUTURE FIELDS OF LABOR, EDUCATION AND WEALTH

NCPN Connect – Charlotte, NC November 2023



# Aaron Burciaga, CAP

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# In 1943 Thomas Watson, Chairman of IBM, said:

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# We are at Al's "PC Moment"

	Riz	ca	nva	PicSo			
	Woebot GPT- Genie	Speech A Face	G App Si	oatChat ftr	DataBot ELSA MeetFrank		
Luma	Remini		opper Hound	Pix Socrate	ChatOn		
WC Wysa	MBO Dream	Wonder	Al Mirror	Alexa	Socratic 24FPS		

# "The Big Book of Al

### RESPONSIBILITIES

- Requirements
  - Industry Standards
  - Government Regulations
- Accelerators
  - Solutions
  - Systems Engineering
  - Best Practices
  - Frameworks
  - Maturity Indices
- Recruiting
  - Position Descriptions
  - Hiring questions
  - Interview support
  - Referrals

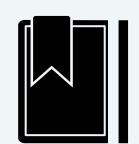
#### Thought Leadership

- Blogs
- White Papers
- Conference Presentations
- Patents & IP
- IRAD



### CHAPTERS (Tech Soln Areas)

- Automation
- Computer Vision
- Data Blending
- Data Engineering
- Data Labelling
- Data Operations
- Data Visualization
- Decision Science
- GeoInt
- Human Factors
- IOT
- Machine Learning
- NLP/NLG
- Optimization
- Simulation
- Synthetic Data
- UI/UX



## **SECTIONS** (Business Applications)

- Call Center
- Cloud
- Consumer & Market
- Cyber Security
- ECIT / R&D
- Environment & Conservation
- Finance & Budget
- Life Science & Health
- Logistics & Supply Chain
- Networks
- Platform
- Portfolio Management
- Pricing & Promotion
- Program Management
- Records Management
- Special Operations
- Talent & Human Resources



# **DATAPRIME**

### **AI ENGINES DRIVE SOLUTION TRANSFORMATION**

### 3-5% Revenue Lift

1-5% Cost Reduction

+50% EBITDA Gains

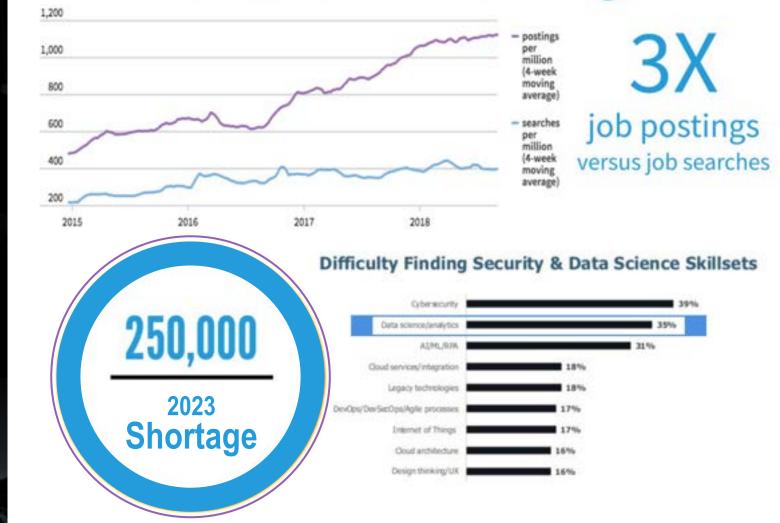
# **AI ENGINES**

X FUNCTION TOP LINE					BOTTOM LINE			
DEAL FLOW	REVENUE & PRICING		CUSTOMER	MARKETING	SUPPLY CHAIN		OPERATIONS	
Data-Driven Valuation	Price Sensitivity	Pricing Optimization	Customer Segmentation	Promotion Effectiveness	Demand Planning	Cost Forecasting	Buy Optimization	Predictive Maintenance
Risk Evaluation	Dynamic Pricing	Promotion Optimization	Customer Lifetime Value	Product Bundling	Inventory Optimization	E/MOQ	Fleet Management	Workforce Scheduling
Portfolio Performance	Demand Forecasting	Capital Allocation Optimization	High Value Customer Retention	Cross Sell / Upsell	Schedule Optimization	Network & Flow Path Optimization	Staffing Forecast	IT Resource Optimization
Exit Timing	Revenue Forcasting	Boundle Pricing	Churn Prevention	Marketing Mix Optimization	Procurement Analytics	Supplier Performance	Spare Parts Optimization	Network Load Optimization
Outperformer Identification	New Product Launch	Product Recommender	Loyality Program Optimization	Assortment & Space	Production Planning	Replenishment Planning	Call Center Analytic	Product Lifecycle Management
	Scenario Planning	Payment/ Claim Fraud	Customer Acquisition Cost	Market Sentiment	Warranty Analytics	Material Planning	$\langle \uparrow \rangle$	
	Spend Optimization	Payables Optimization	Next Best Offer		AP			

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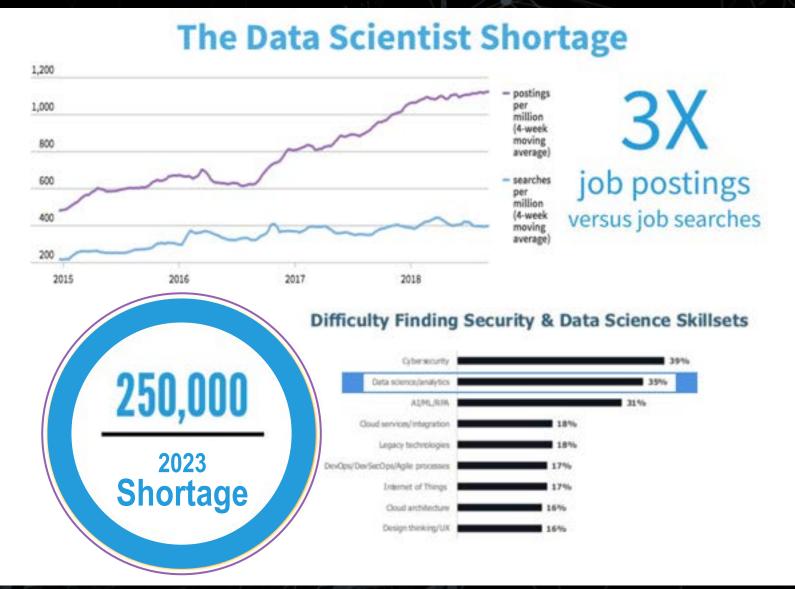
### **The Data Scientist Shortage**



### The Data Science Talent War

"Al specialist (#1) showed 74% annual growth and data scientist (#3) and data engineer (#8) followed with 37% and 33% annual growth."

2023 LinkedIn U.S. Emerging Jobs Report



# AI EVERYWHERE

### MCDONALD'S BITES ON BIG DATA WITH \$300 MILLION ACQUISITION



#### This AI Scouting Platform Puts Soccer Talent Spotters Everywhere

A young player hoping to be spotted by a Premier League club typically relies on luck as much as talent, but artificial intelligence could change all that.

#### CALTURE 248 2. 2023 8.00 AM

#### Why Hollywood Really Fears Generative Al

Unions representing actors and writers are negotiating with major studios to stop AI from running riot in the industry. Their concerns are very real.

## McKinsey acquires Iguazio, a leader in AI and machine-learning technology



US lawyer admits using ChatGPT for case research

US & Canada · 27 May

### Better than Humans: Artificial Intelligence in Intensive Care Units

An Al can suggest appropriate treatment steps in cases of blood poisoning: The computer has already surpassed humans in this respect

15-May-2023 - Vienna, AT

### AI Could Run a Million Microbial Experiments Per Year

UNIVERSITY OF MICHIGAN / 04 MAY 2023

























# CITIZENS

## **Enlist in the Ranks**

 Enroll in an Al-focused associate or baccalaureate program at your local community college

## **Shape Your Skills Strategically**

- Most companies aren't seeking unicorns
- Focus on practical application
- Provide immediate value

# EMPLOYERS

## **Start Local**

- Grow an AI workforce in your own backyard
- Hire graduates from local community colleges
- Join or start a local BILT (Business and Industry Leadership Team)

### **Be Practical**

Counter-balance cost, lifecycle and (re)skilling of your workforce

# STATE & LOCAL

## Est. a Certified Workforce

- Raise the bar on professional standards
- Develop verified certification programs

## **Sweeten The Deal**

- Offer incentives to employers and individuals
  Motivate graduates to stick
- around by guaranteeing state tax credits or rebates

# NATION

## **Support Science Organizations**

Enforce scientific requirements

### **Get Behind Commerce**

 Promote and federate efforts by commerce and labor departments

## THERE ARE NO ELEVATORS TO THE TOP

## WRESTLE THE PIGS BEFORE YOU FIGHT THE ELEPHANT

CAN'T RUN A MARATHON IF YOU JUMP IN AT THE 17TH MILE



Integrate AI concepts into art classes by having students create AI-generated artworks. They can use AI tools to generate images, music, or even poetry. This approach combines creativity with technology and helps demystify AI by showing its creative side.



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### AI in Sports Analytics



Develop a sports-focused Al curriculum where students use Al to analyze sports data, predict game outcomes, or optimize player performance. It combines the excitement of sports with learning Al, making it appealing to a wide range of students.



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Create interactive storytelling experiences where students must solve mysteries using AI concepts. They could analyze data, write simple algorithms, and use AI tools to crack the case. This approach makes learning AI engaging and fun..



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Al Ethics and Philosophy Engage students in philosophical discussions about the ethical implications of Al. Encourage them to debate topics like Al rights, bias in Al algorithms, and the impact of automation on society. This approach encourages critical thinking and helps students understand the broader societal context of Al. Al for Enviro Conservation Create a curriculum that focuses on using AI to solve real-world environmental problems. Students can learn about how AI is used to monitor and protect ecosystems, track wildlife, and combat climate change. This approach connects AI to important global issues and inspires students to make a positive impact.

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## SCIENCE WITHOUT ETHICS IS BLIND.

## ETHICS WITHOUT SCIENCE IS LAME.

- EINSTEIN, PARAPHRASED

## **RESPONSIBLE**

## **RESPONSIBLE AI**

Secure

### Accountable

Algorithms, attributes, and correlations are open to inspection.

### Governed

Organization and policies clearly determine who is responsible for data, output and decisions.

### Impartia

Internal and external checks to enable equitable application across all participants.

### Resilient

Monitored and reinforced learning protocols with humans to produce consistent and reliable outputs.

#### ransparent

Users have direct line of sight to how data, output and decisions are used and rendered.

Protected from potential risks (including cyber risks) that may cause physical and digital harm

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Secure



To B

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# RESPONSIBLE &

## Impartial

- Independence
- Fairness
- Context

### Resilient

- Understanding Risks
- Response Planning
- Effects Tuning

### Transparent

- Documentation
- Expiry
- Analysis of Alternatives

## Secure

- Protection
- Detection
- Verification

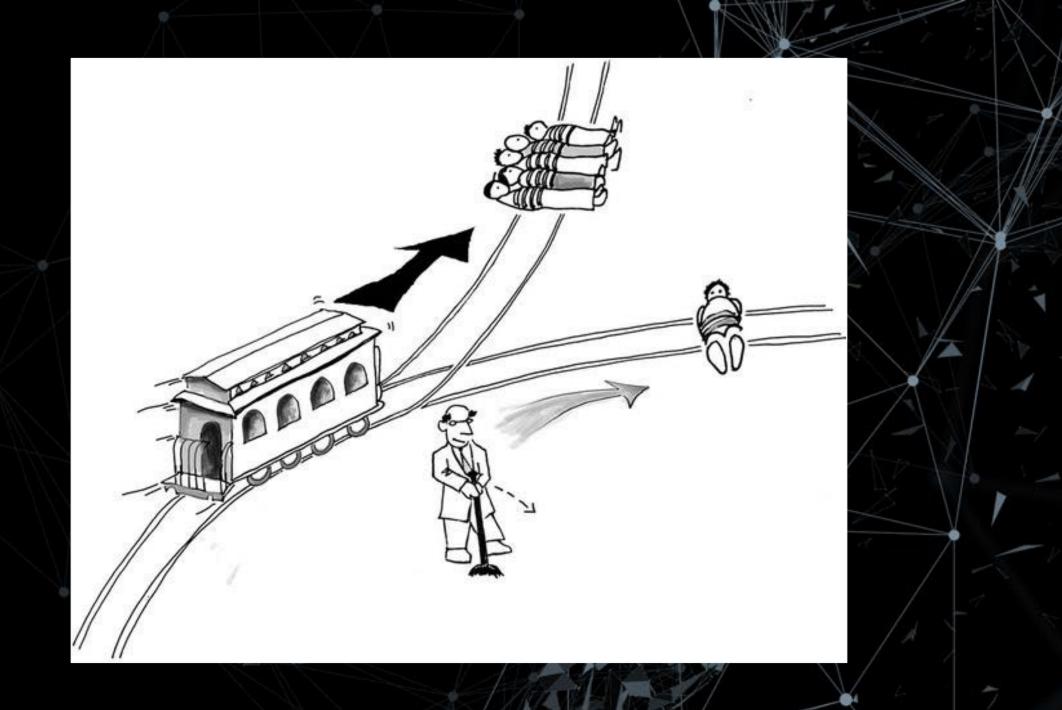
### Governed

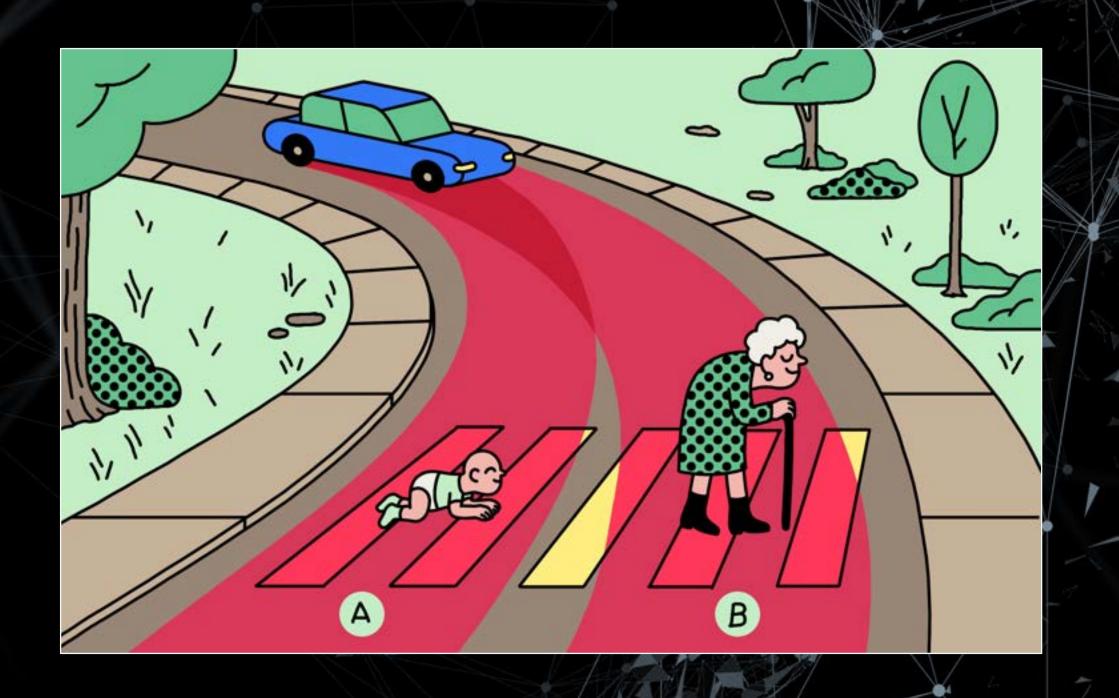
- Managed
- Monitored
- Bounded

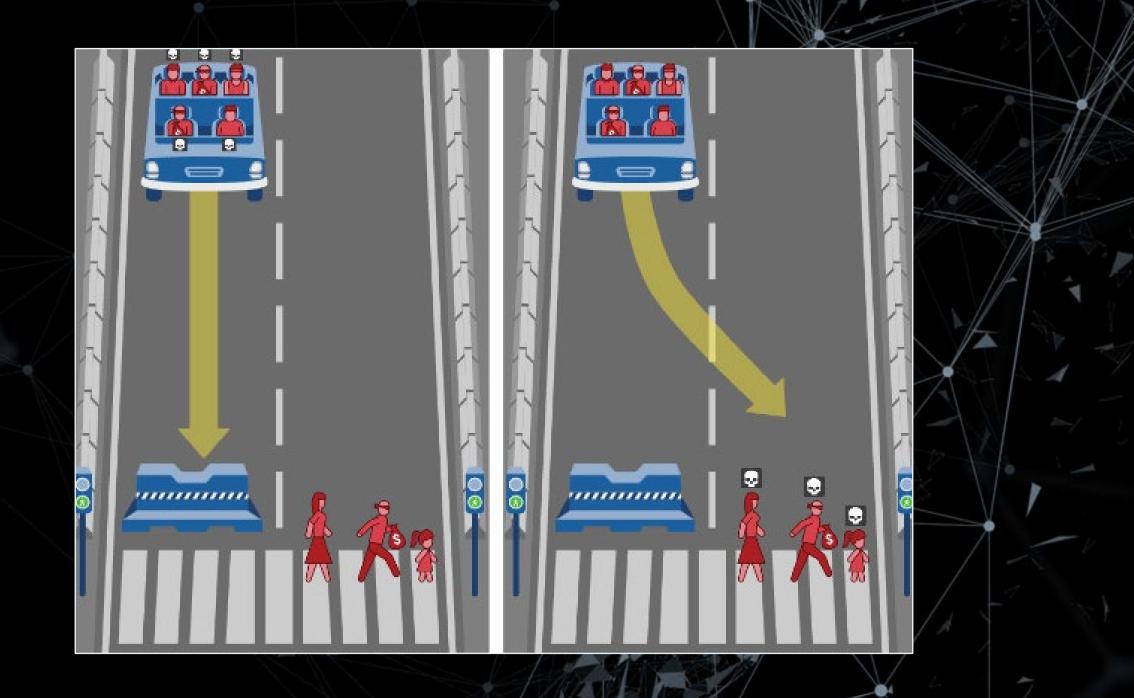
### Accountable

- Audit
- Ledger
- Reasoning











## Be the change. Lead the change.

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