

AI on the Line: Predictive Intelligence to Eliminate Risk in High Hazard Work Environments

Dr. Rosemary Bernal-Gomez
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What is
your -
“Why”

Forbes

Machine Learning And Organizational Change At Southern California Edison

By [Zara Deveson](#) Contributor · ID
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AI Change
Management
Success Story

Why Predictive Intelligence?

- Machine learning applied to operational data
 - Pattern detection across tasks & conditions
 - Risk scoring before execution
 - Actionable foresight for leaders



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Push Back

“Go kick rocks!”

- Job replacement?
- It will never replace my knowledge
- It's not a crystal ball!

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What it CAN do

• Help compliment your expertise

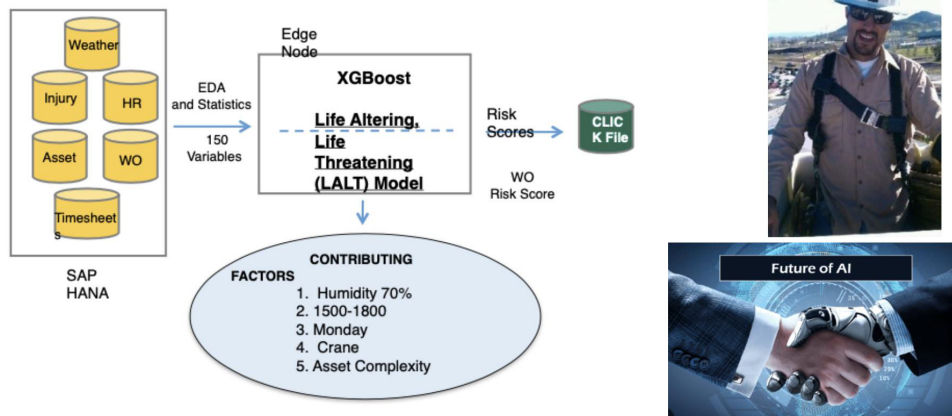
- Analyze the risk before you commence the work
- Flag a work order
- Provide Risk information

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Saving lives through predictive analytics



Safety Culture Adoption- (Field)

• Success = sustainability and adoption

- Without buy-in, you have nothing
- Get out in the field and observe
- Gather support from your toughest crew and give them what they WANT, not what you think they need = Their Wish List
- Choose Ambassadors
 - Meet with them as soon as you have updated the model
- Feedback, back to the drawing board, update new iteration
 - Rinse and repeat

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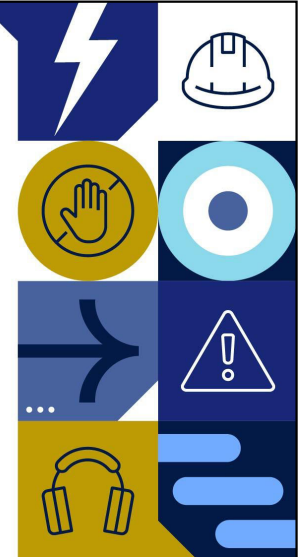
Safety Culture Adoption- (C-Suite)

- **Success = Fewer to no injuries each month/year**
 - Monthly progress reports on the predictive model, iterations, thresholds, alerting and policy implications
 - Clear milestones for validation, deployment and training
 - Transparent change log highlighting improvements, or lack there of risk mitigations



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Steps for Success....



Step 1: Define the Risk to Eliminate

- **Focus on Life Altering / Life Threatening and Fatalities**
 - Clarify measurable outcomes
 - Align with safety priorities



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Step 2: Assess Data Readiness

- **Completeness**
 - Consistency
 - System inter-operability
 - Governance ownership



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Task complexity

- Material Codes
- Type of Equipment
- Environmental conditions
- Time-of-day patterns



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Step 3: Pilot with Purpose

- **Operational ownership**
 - Clear metrics
 - Defined scale strategy



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Collect operational data

- Train predictive model
- Generate risk insights
- Embed into workflow
- Drive preventive action



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Technology Alone Is Not Enough

- **Trust determines adoption**
 - Transparency reduces fear
 - Leadership modeling drives culture



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Step 4: Scale Responsibly

- Monitor model accuracy
 - Retrain & refine
 - Communicate wins
 - Institutionalize insights

Human + Machine Advantage

AI detects patterns humans might miss

- Humans apply judgment & context
- Together: stronger decisions

The Future of High-Hazard Safety

- From reactive to predictive
 - Vision
 - Data Quality Governance
 - Organizational Change

Final Charge

- Every second matters
 - Predict before exposure
 - Lead boldly
 - Eliminate risk—don't just manage it

Questions & Discussion

- Where can predictive intelligence create the greatest impact in your organization?

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