



Experiential AI for an Insurance Leader

How Northeastern's Roux Institute and Institute
for Experiential AI Enabled FullscopeRMS to
Lead AI For Insurance with a Data Roadmap, a
Value-Driven Solution, and Workforce Education

CHALLENGE

CLIENT:

FullscopeRMS is a
standalone business
of **Sun Life U.S.**

PROJECTS:

Data Opportunities
Roadmap

Claims Processing
Tool

Workforce Upskilling:
Practicum Course

PERIOD OF

PERFORMANCE:

July-December 2021

“Bigger and Bolder”

FullscopeRMS's Gabe House and Dave Messinger recognized the enormous value of artificial intelligence (AI) to enhance their disability insurance product offering. At first, however, they did not have the advanced analytics to fully leverage the new technologies. That's when FullscopeRMS turned to the Roux Institute and the Institute for Experiential AI to find a solution.

“We have plenty of data, but insurance companies are fundamentally cautious entities—that's what has created their long-term success,” says Dave Messinger, director and associate actuary of FullscopeRMS.

These days, Messinger says, “The data techniques have to be bigger and bolder, and a little bit of efficiency goes a long way for return on investment.” In order to put those techniques into practice, FullscopeRMS needed to identify and prioritize their data opportunities, execute on a solution, and most importantly ensure their workforce was prepared for a new approach to data.



DAVE MESSINGER

Director, Associate Actuary,
FullscopeRMS



GABE HOUSE

Head of Disability, Absence and Life,
FullscopeRMS

1



DATA OPPORTUNITIES ROADMAP

Result: Millions in
opportunities identified

2



SOLUTION DELIVERY

Result: At least \$100K
saved in first year

3



PRACTICUM COURSE

Result: AI-enabled
workforce

THE APPROACH

Phase 1: Data Opportunities

The collaboration began with a Data Opportunity Roadmap (DOR) exercise performed by the AI Solutions Hub, the EAI solutions delivery team based at the Roux Institute. The DOR is a series of interviews and research with the FullscopeRMS team to identify their biggest business challenges and how data could solve them.

“We built buy-in so everyone understood the possibilities, and EAI and the Roux Institute’s data scientists started to understand what our problems were so they could fill in the gaps,” explains Gabe House, head of disability, absence and life at FullscopeRMS.

The AI Solutions Hub identified **millions of dollars in potential value across more than 50 solution building, workforce upskilling, and data optimization opportunities**. They worked with FullscopeRMS to pick the highest-priority opportunity and got to work.

Phase 2: Building a Solution

The Data Opportunities Roadmap identified a high-leverage solution that uses Natural Language Processing (NLP)—a methodology at work in Large Language Models like GPT-4 and LLaMA—and a discipline in which the EAI has built a team of specialized research scientists.

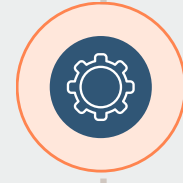
The solution flags inconsistencies between unstructured data and disability claims to identify claims of interest for a human case manager to investigate. By implementing this tool in-house as part of its claims process, Fullscope created significant operational efficiencies—at least \$100,000 in the first year—while maintaining the critical element of human review, demonstrating the necessity of the “Experiential” part of EAI.

“Experiential AI” is our word for AI with a human in the loop,” says Usama Fayyad, Executive Director at EAI. “Human-in-the-loop is necessary not just for the responsible practice of artificial intelligence, but to achieve high performance and desired business outcomes.”

To maximize the positive impact of human-AI interaction, FullscopeRMS knew they needed to enable their workforce to interpret and interact with AI tools. A Roux Institute analytics course provided the perfect opportunity.



DEFINE



BUILD



ACCELERATE



SCALE

\$100K

saved in the first year of the partnership
using new skills, workflows, and AI tools



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APPROACH

Phase 3: the Practicum

With any solution, human operators are the key to success. That's why the third phase of the project—the Practicum course—was the most critical.

In a Roux classroom taught by Professor Umesh Hodhegatta, FullscopeRMS trainees worked with data scientists to automate and scale data processing to accelerate the claims investigation process, learning by using synthetic and de-identified data. By the end of the course, business learners, data analytics students, and data scientists were speaking the same language and working toward the same goals of realizing and implementing the power of data analytics.

"Oftentimes, an insurance company might bring in consultants who propose a solution, but that doesn't build our team's ability to take action in the future," says Messinger. "By training our own talent in the company with these skillsets and opening up to outside talent, we can create a mindset and embed sustainable processes as part of how we do business."



UMESH HODHEGATTA

Assistant Teaching Professor, Analytics

RESULTS



ROADMAP

AI Solutions Hub conducts a Data Opportunities Roadmap (DOR).

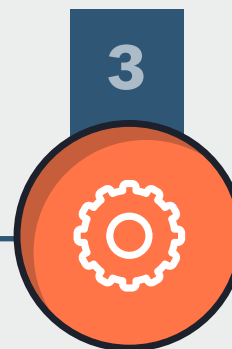
RESULT:
Millions in data opportunities identified.



SOLUTION

AI Solutions Hub delivers highest-priority solution.

RESULT:
Claims processing tool uses unstructured data to save \$100,000 in first year.



PRACTICUM COURSE

FullscopeRMS learners work with Roux Institute students to develop dashboard & analytics methods for claims processing solution.

RESULT:
AI-enabled workforce building tools to increase efficiency.



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**USAMA
FAYYAD**

Executive Director,
EAI



**JIMI
SHANAHAN**

Director,
AI Solutions Hub



**DAN
KOLOSKI**

Head of Learning
Programs, Professor
of the Practice



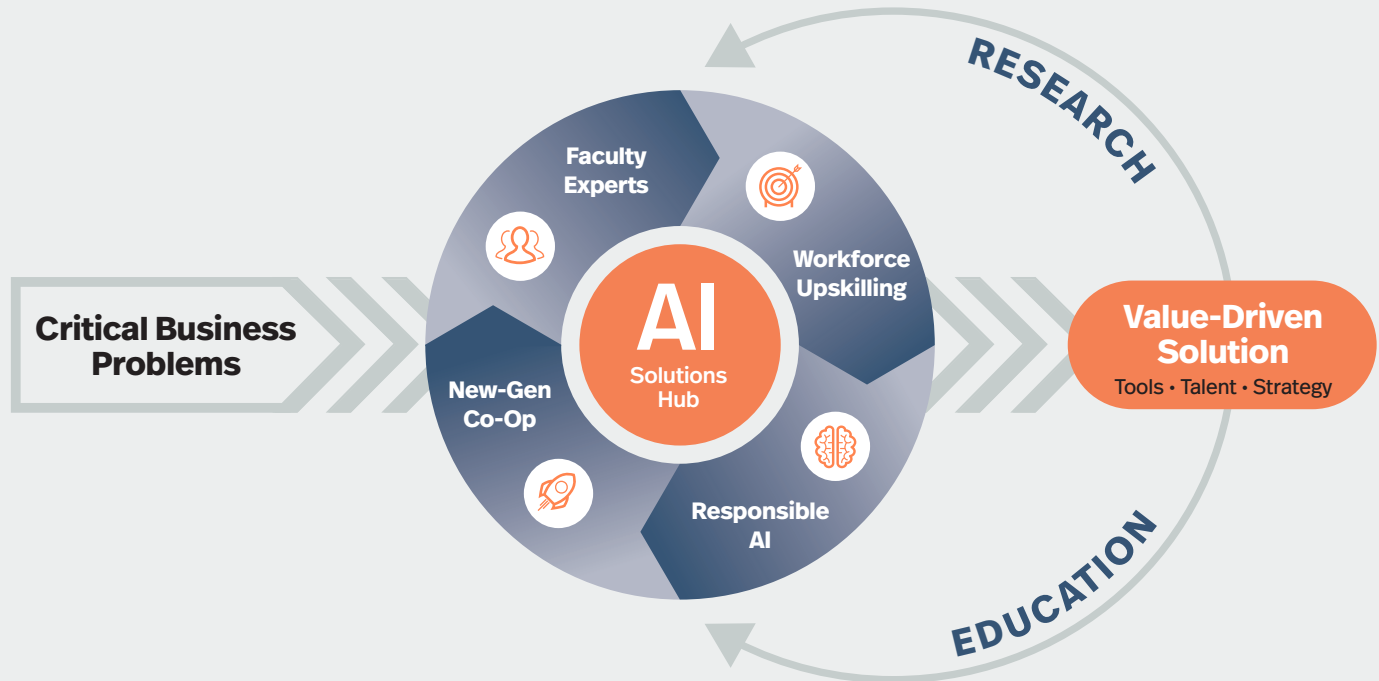
**MICHAEL
BENNETT**

Director of Education
Curriculum and Business
Lead for Responsible AI



**UMESH
HODHEGATTA**

Assistant Teaching
Professor, Analytics



The AI Solutions Hub is a full-time solutions delivery team made up of professional data scientists, data engineers, and project managers. They work alongside faculty and mentor students and employees alike to drive differentiated results.



CYBERSECURITY



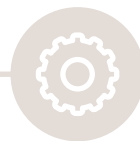
LIFE SCIENCES



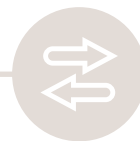
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INSURANCE



MANUFACTURING



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FINANCIAL SERVICES



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