SAS HACKATHON

Inspiration and innovation in action

Discover the real-world challenges tackled in 2023.

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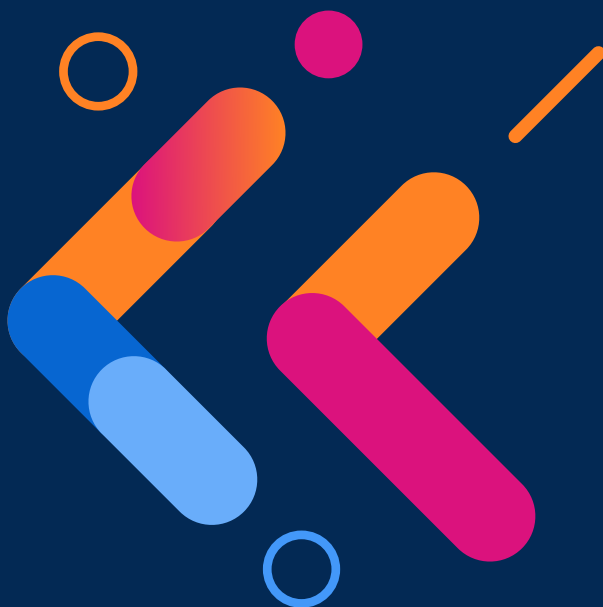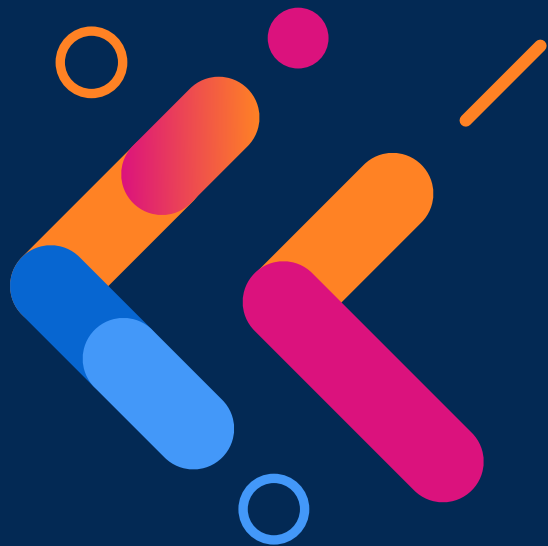
So much more than a competition.

SAS HACKATHON

Great ideas can come from anyone, anywhere. When data scientists and the tech-savvy come together from different regions, with diverse backgrounds and skill levels, amazing things can happen.

For the past five years, that's what the SAS Hackathon has done. Some of the most brilliant minds have teamed up to invent novel solutions to business challenges and humanitarian causes. Many have changed the way we do business — and even saved lives.

What makes the event unique? Traditional in-person hackathons gather coders for a few days. But the SAS Hackathon? It's different — it's more than a competition. How so? We think of it as a team sport. Participants collaborate online for a month, allowing ideas to be nurtured and developed into real-world solutions.

We say: Roll up your sleeves! Get hands-on with SAS® Viya® — and experience speed, performance, productivity of the AI and analytics platform with seamless integration with open source. Take advantage of learning resources and unparalleled guidance from experts at no cost. It's a team sport for us too.

Our grassroots beginning as a regional event in the Nordics has now grown into an annual global event. The SAS Hackathon attracts hundreds of participants — from data scientists and developers to business analysts and marketers as well as newcomers to analytics.

We've seen innovation at its best. Breakthrough approaches that extend beyond the hackathon. Models and technologies have gone into the marketplace since solutions are the team's intellectual property. And we've seen great passion for problem solving.

In 2023, there was robust interest in the event — 1,400 people from 69 countries applied to join the hack. More than 100 teams representing 200 organizations from every industry completed the hack. The contributions were immense and we believe everyone is a winner! And thanks to our partner Intel, who loves innovation like SAS.

We hope you are inspired by this year's impressive solutions. To learn more, scan the QR code with each team's business case and watch them tell their story.

Peter Lundquist and Einar Halvorsen
SAS Hackathon Office

BANKING

Business Data Partners
UK

ECONOMIC RECESSION FEARS: STOCKS AT RISK?

Evaluating macroeconomic factors impacting business performance and stock prices

Santander
US

INFORMED DECISIONS ABOUT THE SOCIAL AND ENVIRONMENTAL IMPACT OF PURCHASES

Tracking your carbon footprint in banking to help consumers make informed decisions

Inspira Enterprise
India

BANKING ANALYTICS SOLUTION FOR PUBLIC SECTOR BANKS

Avoid customer churn and ensure customer retention

Banco de Sabadell
Spain

BOOSTING CARBON FOOTPRINT REDUCTION

Calculating a bank employee's carbon footprint and simulating reduction opportunities

Absa Group
South Africa

RISK WEIGHT ASSET ANALYZER

A solution for interrogation and credit loss movement

EY
Canada & North Africa

REAL-TIME MONITORING OF OPERATIONAL RISK

Modernization and transformation of business processes with embedded intelligent decisioning

Large Global Bank
US & AP

CARBON CALCULATOR FOR HOUSING

Utilizing carbon credit offsets to fund affordable housing

ENERGY

algoWatt
University of Genoa, Italy & Oakland University, US

ANALYTICS FOR ENERGY COMMUNITY PLANNING, SIZING AND OPERATION

Leveraging data-intensive analytics for optimal integration of renewable distributed generation

Butterfly Projects
UK

AN ASSESSMENT OF SUITABILITY FOR GREEN ENERGY

Using weather data to assess green energy location suitability

Econgroup
Netherlands

REDUCING CO2 AND DEFORESTATION IN AFRICA

Use sensor data from cookstoves to reduce CO_2 emissions

NEC
US

USING SMART-METER DATA TO IMPROVE SUSTAINABILITY

Electricity capacity forecasting has become more complex as energy variability grows

Snam
Italy

MONITORING OF GAS PIPELINES

A predictive model to monitor threats against gas transportation and distribution

Oklahoma State University
US

IMPROVING THE SUSTAINABILITY OF AVIATION FUELS

Carbon reduction needs innovation as global air travel rises

Positive Thinking Company
Germany

PREDICTING REAL-TIME ENERGY USE TO INCREASE SUSTAINABILITY

AI-driven optimization model to reduce energy consumption in manufacturing

HEALTH CARE & LIFE SCIENCES

iCarenetwork & Carnegie Mellon University
US

LOWERING HOSPITALIZATION COSTS FOR DIABETICS

AI recommendation engine to assist administrators in making the best decisions

Biogen
US

AUTOMATING MANUFACTURING SCALE-UP

A web application for moving from small-scale to large-scale bioprocessing more quickly

PW Consulting & CuraMare
Netherlands

PREDICTING HOSPITAL STAFFING COSTS TO STAY FINANCIALLY HEALTHY

Workforce analytics reveals insights into worker salary requirements

Capacio & Sigma Technology
Sweden

FINDING THE RIGHT CANDIDATE FOR THE JOB

Improve hiring decisions by using a neuroscientific approach to candidate assessment

Elevance Health
US

PREDICTING MEDICATION ADHERENCE TO IMPROVE CMS STAR RATINGS

Predictive modeling identifies patients at high risk of non-adherence and enables targeted interventions to improve medication use

Oklahoma State University
US

REDUCING FOOD INSECURITY

A predictive model can help support families in need

University of Washington
US

SOLVING THE MYSTERY OF LOWER NATIONAL FERTILITY RATES

Korea's birth rate has dropped to an all-time low

Katalyze Data
UK

EARLY PARKINSON'S DETECTION AND SUPPORT

Early identification helps millions improve quality of life

Elevance Health
US

MITIGATING THE EFFECTS OF MULTIPLE CHRONIC CONDITIONS

A predictive model for identifying diseases leading to cardiovascular deaths

GLOBAL WINNER
Student & Young Talent

Narodowy Instytut Onkologii
Poland

ANALYZING SOCIAL MEDIA SIGNS OF SELF-LOATHING

Negative body image identification to support better mental health

HealthCore
US & Europe

ASSESSING THE VARIABLES LEADING TO DIABETES DEATHS

Environmental and social factors weighed to identify high-risk factors

GLOBAL WINNER
Trustworthy AI

Centro Hospitalar de Lisboa Ocidental, Portugal

LOWERING INFANT MORTALITY WITH EARLY SEPSIS DETECTION

Data integration helps detect infections and sources

Shimadzu
Japan

POLICY RECOMMENDATIONS WITH AI TO IMPROVE LIVING SITUATIONS

App designed to assess well-being for holistic health guidance

HEALTH CARE & LIFE SCIENCES

GLOBAL WINNER
Health Care & Life Sciences

Syntho
Netherlands

AI-GENERATED SYNTHETIC DATA IN HEALTH CARE

Using AI-generated synthetic data in hospitals can be a powerful tool for utilizing data faster, without privacy concerns

Roche Diabetes Care
Spain & US

PREDICTIVE MODEL FOR CHRONIC KIDNEY DISEASE

Predicting the risk especially for people with diabetes

Western Governors University
US

A RISK ASSESSMENT FOR PREGNANCY

Informing vulnerable women of potentially life-threatening complications

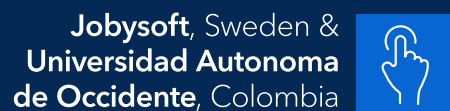**Gelre Ziekenhuizen**
Netherlands

PREDICT PATIENT INFLOW TO INTENSIVE CARE UNIT

Machine-learning algorithms use historical data on patient admissions, demographics, medical history, etc.

Oklahoma State University
US

USING A PREDICTIVE MODEL TO LOWER STROKE RISK

Early intervention can lead to stroke prevention

Jobysoft, Sweden & **Universidad Autonoma de Occidente**, Colombia

SECURITY ALGORITHM FOR IMAGES

Image verification for health care and other industries

INSURANCE

Algomine
Poland

MONETIZING IOT DATA TO CREATE DYNAMIC PRICING FOR POLICYHOLDERS

Assess risk profiles across a wide range of industry sectors

Fit2Be/SNSPA
Romania

PERSONALIZING HEALTH INSURANCE TAILORED TO UNIQUE FITNESS PROFILES

Sensors and a custom app provide an accurate assessment of health needs

MAMUT
France, US, Brazil

TRACING COST ALLOCATIONS FOR INSURERS ACROSS ALL LINES OF BUSINESS

Model development illustrates the power of a low-code approach

EY
Canada & North Africa

QUANTIFYING OPERATIONAL RISK

A low-code approach to model development

FoodWay2Health
Poland

PROTECTING EQUIPMENT AND INVENTORY WITH IOT DATA

Smart vending machines provide a stream of real-time data to lower downtime expenses

GLOBAL WINNER
Decisioning

Linktera
Turkey

COLLECTING NEWS OF CATASTROPHIC EVENTS TO RESPOND IN AN INFORMED WAY

Automated analysis provides critical requirements for crisis deployments

GLOBAL WINNER
Insurance

Illinois Institute of Technology, US

IDENTIFYING ESG INVESTMENT OPPORTUNITIES WITH LOWER RISK

An ethical approach to financial portfolio development

IoT

Create Technologies
Singapore

ANALYSIS OF CROP DATA
COLLECTED BY DRONES

Location data and analytics enable accurate tracking from cultivation to harvest

NEC
US

USING SMART-METER DATA TO IMPROVE SUSTAINABILITY

Electricity capacity forecasting has become more complex as energy variability grows

ITOCHU
Techno Solutions
Japan

HEALTH MONITORING TO PREVENT SOLITARY DEATH

Monitoring posture and heart rate based on video and AI

REDE
Kazakhstan

DIGITAL TWIN OF EQUIPMENT IN GOLD MINING

Improving efficiency, predicting maintenance needs and optimizing production with AI and streaming analytics

Positive Thinking Company
Germany

PREDICTING REAL-TIME ENERGY USE TO INCREASE SUSTAINABILITY

AI-driven optimization model to reduce energy consumption in manufacturing

Klinter AI and Kingston University
UK

INTEGRATING OBSERVABILITY IN THE CONSTRUCTION INDUSTRY

Using AI to identify and report risk in the workplace

University of Michigan
US

BETTER ROAD MAINTENANCE

Analyzing drone images to identify road conditions

Positive Thinking Company
Germany

TOWARDS ECO-FRIENDLY LIVING

Personalized recommendation engine for a more sustainable lifestyle and reduced carbon footprint

Notilyze
Netherlands

ANALYZE THE CHEESE PRODUCTION PROCESS

Analyzing cheese batches to reduce food waste and make smarter decisions

StarCore Analytics & Pemerintah Provinsi DKI
Indonesia

FLOOD DISASTER RECOVERY JAKARTA

A centralized and integrated flood control system, based on an analysis of real-time data

Dake Solutions
South Africa

OPTIMIZING DELIVERY PROCESSES IN MANUFACTURING

Using IoT for goods security and transport at scale

PUBLIC SECTOR

Alberta Public Safety and Justice
Canada
BAIL COMPLIANCE TRACKING
Tracking of recidivism rates for offenders out on bail

AVISIA
France
CLIMATE CHANGE THREATENS ANIMAL SPECIES
A prediction of their extinction due to different environmental factors

Bissell Centre
Canada
SUPPORT TO HELP ELIMINATE POVERTY
Understand homeless population data and get deeper insights

Oklahoma State University
US
COMBAT ILLEGAL, UNREPORTED AND UNREGULATED FISHING
Insights that can help protect marine life and the ecosystem

GLOBAL WINNER
Natural Language Processing

REGIONAL WINNER
EMEA

Linktera & EPAM
Turkey
SOCIAL LISTENING FOR EFFICIENT EMERGENCY AND DISASTER RESPONSE
Social media monitoring for critical support service to optimize logistics during disasters

Oklahoma State University
US
IMPROVING RESOURCE ALLOCATION OF LAW ENFORCEMENT
Analysis of traffic stop-and-search procedures for resource optimization

REGIONAL WINNER
Americas

Hope for Justice
US
MODERN SLAVERY: A HIDDEN CRIME
Predictions of forced labor use and risks in their supply chains

GLOBAL WINNER
Machine Learning Public Sector

REGIONAL WINNER
Asia Pacific

StarCore Analytics & Pemerintah Provinsi DKI
Indonesia
FLOOD DISASTER RECOVERY JAKARTA
A centralized and integrated flood control system, based on an analysis of real-time data

ZEAL Corp.
Japan
LEARNING FROM BEHAVIORS DURING COVID-19
Analysis of past consumer data for future trends and potential national policies

Posten
Norway
A PERSONALIZED AI DATA ANALYTICS CHATBOT
Interact with data by using conversational prompts and get data analytics at your fingertips

Town of Cary, NC
US
WAREHOUSE INVENTORY MODEL
Reduce supply chain disruption and costly downtime

North Carolina Agricultural and Technical State University (NCA&T), US
CROP YIELD DISTRIBUTIONS, CLIMATE MOVEMENT AND ECONOMIC ISSUES
Farm policies enhanced by efficient use of technology and broader data integration

GLOBAL WINNER
People's Choice Award

Digital-Agentur Heidelberg, EPAM & Fujitsu, Germany
MOBILE INSIGHT AND URBAN TRAFFIC FLOW MONITORING
Prediction of hotspots and bottlenecks provides a better basis for city planning

RETAIL & CONSUMER GOODS

Datacurate Technologies
India

PRODUCT DEMAND FORECASTING FOR FAST-MOVING CONSUMER GOODS

Forecasts based on historical demand and promotion influence

Fair Factories Clearinghouse
US

FAIR FACTORIES CLEARINGHOUSE

Metrics for reporting on requirements and benchmarks in companies' supply chains

Streamify
Sweden

NEW APPROACH USING LIVE SHOPPING DATA

Significantly reduce return rates and deliver supply chain efficiency

Aerovías de México
Mexico
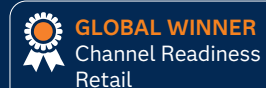
CUSTOMER RELATIONSHIPS AND BUYING BEHAVIORS

Graphical algorithm identifies communication and influencers

Oklahoma State University
US

AN ANALYSIS OF EV ADOPTION AND CHARGING STATIONS

Predict suitable locations for gas/charging stations based on adoption rates

Innova-TSN
Spain

TIME TO GO SHOPPING

Optimize the forecasting of consumer shopping baskets

TELECOM

Telekom Srbija
Serbia

SMART SOLUTION FOR OFFICE SPACE OPTIMIZATION AND ENERGY SAVINGS

IoT sensors and usage data create a more intelligent workspace

Türk Telekom
Turkey

DETECTING MALWARE BEFORE IT BECOMES A PROBLEM

By improving the security of IoT devices, cybercriminals can be thwarted more easily

MANUFACTURING

Notilyze
Netherlands

ANALYZE THE CHEESE PRODUCTION PROCESS

Analyzing cheese batches to reduce food waste and make smarter decisions

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problem.

hack.

solve.

innovate.

SAS
HACKATHON