

# **Developer Series**

Join our webinar series to expand your developer skills!

Security Tuesdays

Data Science and AI Wednesdays

Cloud Native and Red Hat OpenShift

Thursdays

[meetup.com/IBM-Cloud-MEA](https://meetup.com/IBM-Cloud-MEA)

**IBM Developer**



# Build and Compare your ML Models the Easy Way with IBM SPSS Modeler

—  
**Khalil Faraj**

Developer Advocate, UAE

Get Started Here: [ibm.biz/CR-Modeler](https://ibm.biz/CR-Modeler)

Asset: [ibm.biz/cr-modeler-repo](https://ibm.biz/cr-modeler-repo)

Survey: <https://ibm.biz/BdfMKX>



Introduction to Serverless Applications on Red Ha... ⓘ

Starting in 4 hrs, 46 min & 10 sec

Thu, Jan 28, 2021 5:00 PM GST

View more info about this event

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People

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+ Say something nice



# Agenda

## **AI vs ML**

- Machine Learning Process
- Machine Learning Types
- Main Challenges

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# Why join Call for Code

## Skill-building

You can learn about industry-leading open hybrid cloud technologies and develop skills that can enhance your professional career while making a positive impact on the world.

## Social Good

By fighting back against the most pressing humanitarian and societal issues of our time, you are building and/or contributing to projects that have the potential to be deployed into communities in need.

## Community

Are you ready to be a part of a community of societal problem solvers? Call for Code is your opportunity to meet and network with people from around the world who share similar passions for using **#TechforGood**.

## Ideas to Action

This isn't your average hackathon. If you want the chance to build a solution that can make true impact in the field, Call for Code can turn your idea into action through deployment support from The Linux Foundation.



## \$200K Grand Prize

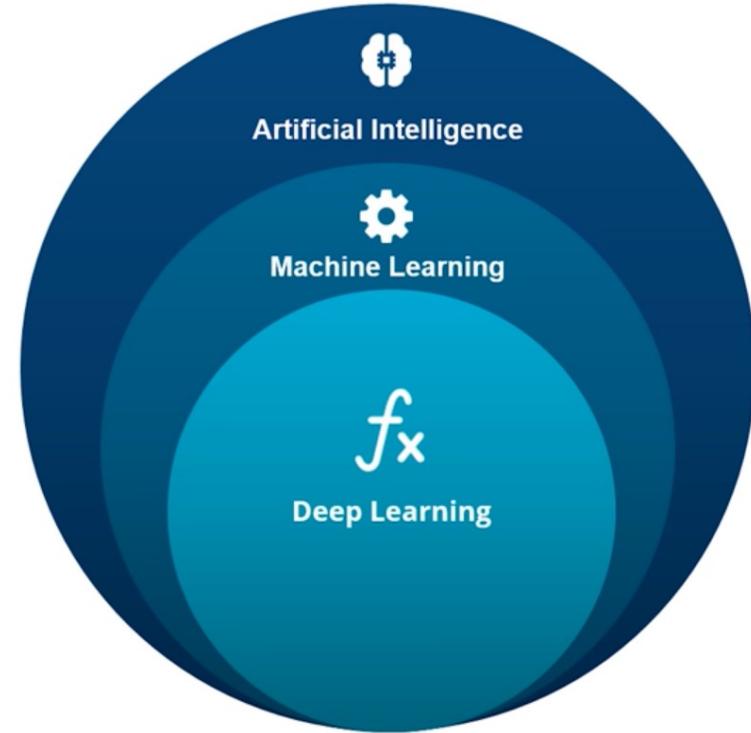
The winner of the Call for Code Global Challenge wins \$200k and support from IBM, and its partners help set-up the winning team from concept to company.

Get started at:

[developer.ibm.com/callforcode/](https://developer.ibm.com/callforcode/) →

# Artificial Intelligence vs Machine Learning

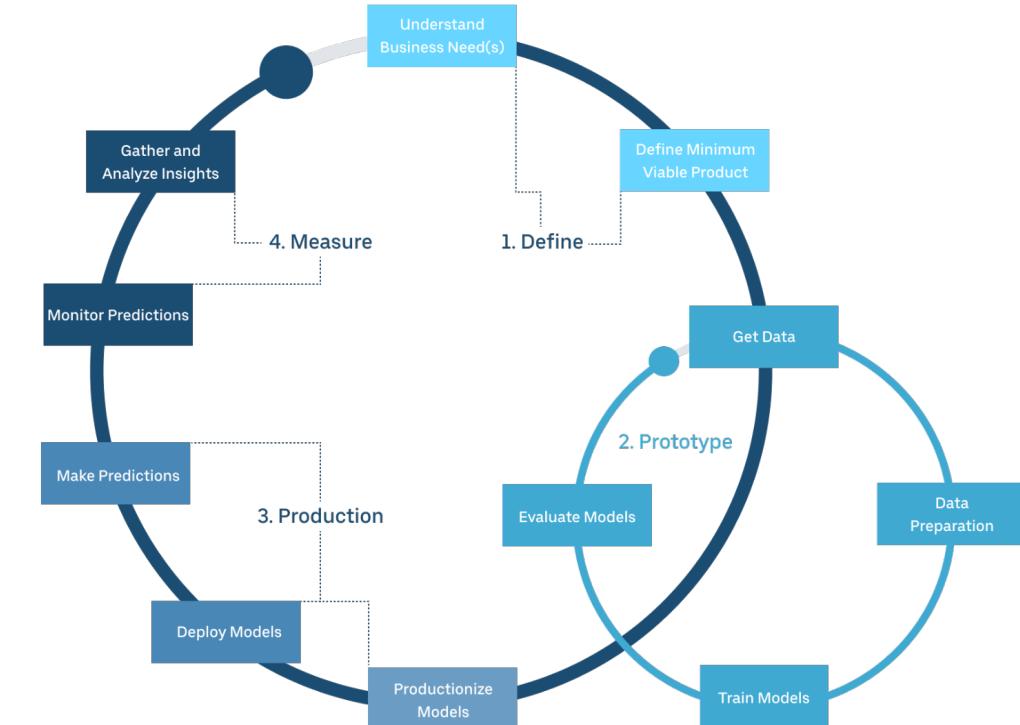
- **Artificial Intelligence** is the making of intelligent machines by enabling the machine to copy human behaviours.
- **Machine learning** is subset of AI uses statistics to enable machines to improve with experience.
- **Deep learning** is subset of machine learning that enables computers to solve more complex problems.



<https://www.edureka.co/blog/ai-vs-machine-learning-vs-deep-learning/>

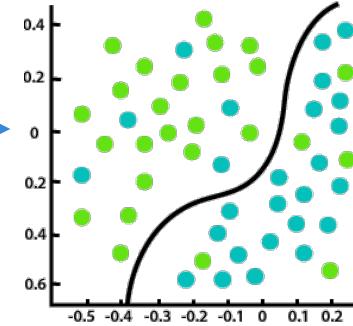
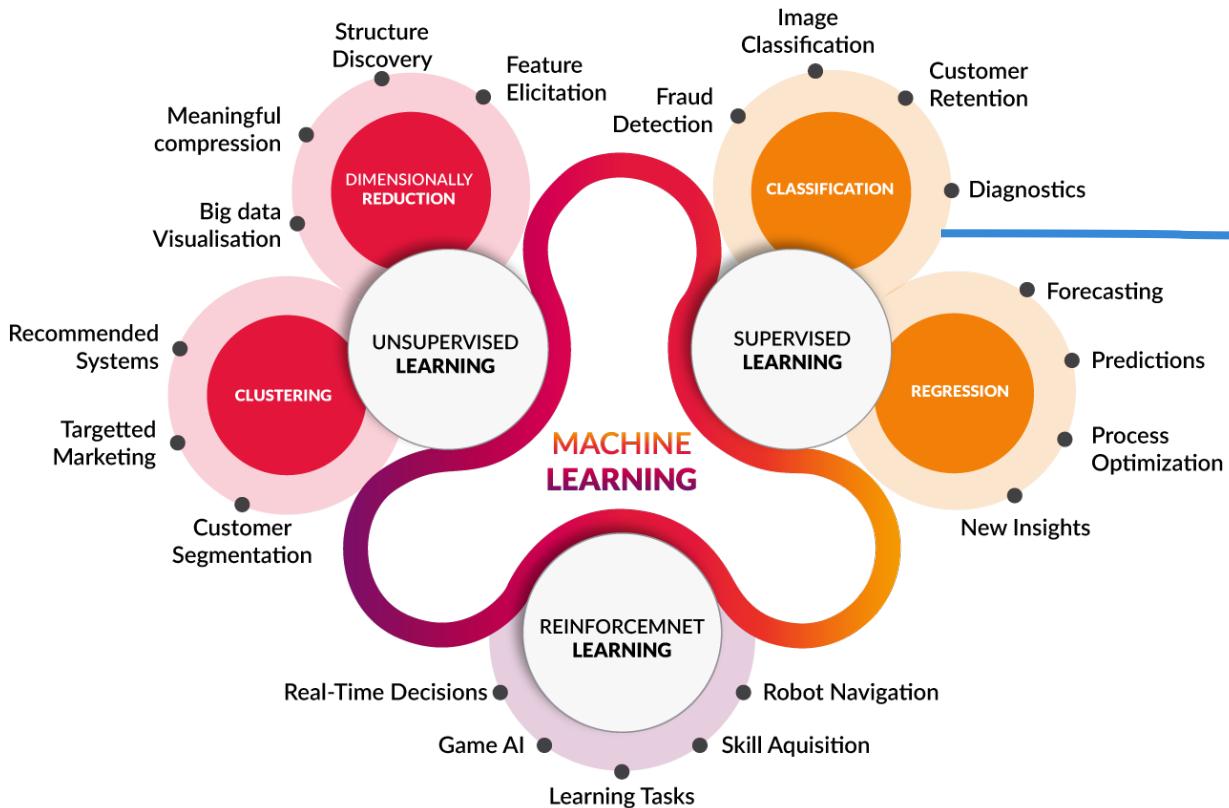
# Machine Learning Process

- Define the problem and solution
- Develop and prototype the model
- Produce the model
- Measure the model



<https://www.kdnuggets.com/2020/07/some-things-uber-learned-machine-learning-scale.html>

# Machine Learning Types



<https://laptrinhx.com/machine-learning-i-introduction-linear-regression-explained-3160564266/>

<https://towardsdatascience.com/coding-deep-learning-for-beginners-types-of-machine-learning-b9e651e1ed9d>

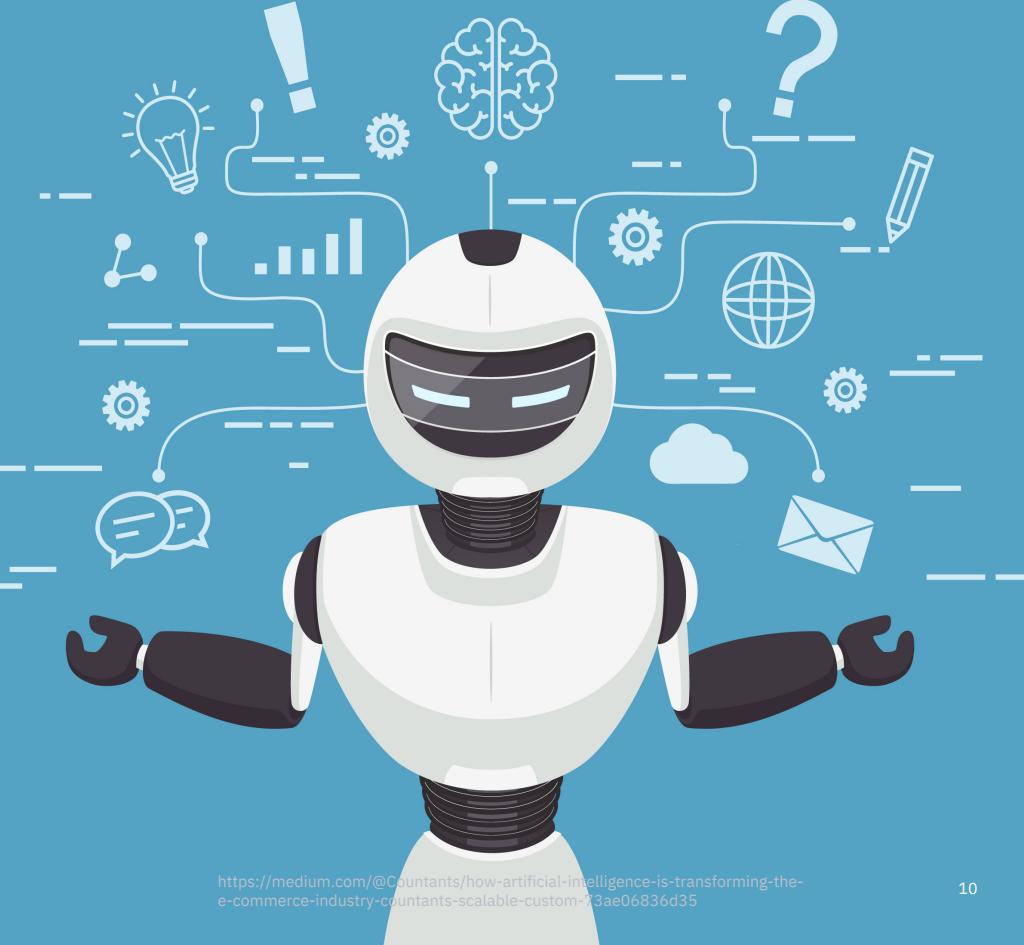
# Main Challenges

- High demand for data scientists and ML engineers
- Lack of skills to meet the demand
- Traditional ML techniques are time consuming and require a lot of effort



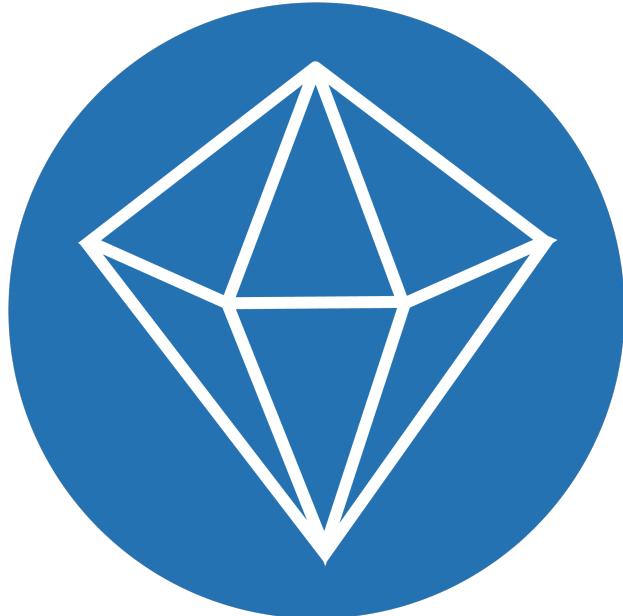
# Traditional Machine Learning

- Data preparation
- Deciding on the right algorithm
- Requires strict resources
- Deployment Challenges



# IBM SPSS Modeler

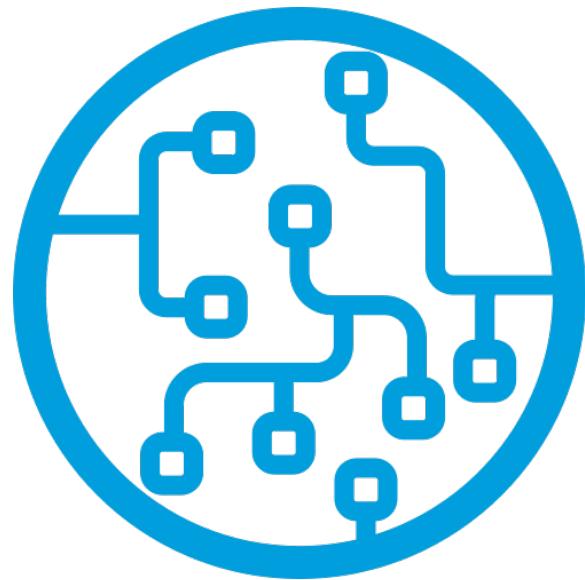
- SPSS Modeler ≠ SPSS Statistics
- Data Science and machine learning solution
- Data mining and text analytics software application
- Used to build predictive models



<https://www.caroldolls.xyz/products.aspx?cname=machine+learning+spss&cid=28>

# Why SPSS Modeler?

- No programming is required
- Automates tedious tasks that are time consuming in traditional ML approaches
- Easy to use visual interface with drag and drop feature to build, evaluate, test and deploy a ML model
- Boost productivity



<https://www.pngwing.com/en/free-png-vddvt>

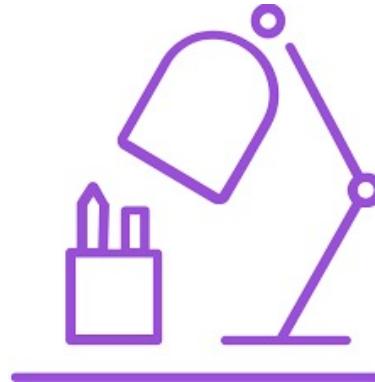
# Nodes Palette

SPSS Modeler has **8** main nodes that we can use to build our flow:

- **Import Node:** Data source (data asset, user input, simulated data)
- **Records Ops:** Perform operations on Data records (merge, aggregate,...)
- **Field Ops:** Perform operations in Data fields (filtering, manage values,... )
- **Modeling:** Define model builders (ML algorithms)
- **Text Analytics:** Perform text mining operations
- **Graph:** Perform data visualizations with chart builders
- **Output:** Model results
- **Export:** Export the results so they can be viewed in external apps

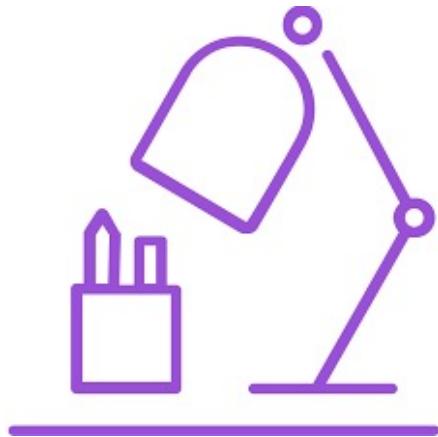
# Hands On

- Sign up/Log in to your IBM Cloud Account  
<http://ibm.biz/CR-Modeler>
- Follow along for the hands-on  
<http://ibm.biz/cr-modeler-repo>



# Workshop

- Prepare data and build predictive ML models to assess risk of application
- No coding required as we will be using SPSS Modeler on Watson Studio (CP4D)
- Compare different models
- Save and deploy the best model on IBM Cloud



# What is Call for Code?

Call for Code invites developers and problem solvers around the world to **build and contribute to sustainable Open-Source software solutions, that address social and humanitarian issues**, while ensuring solutions are deployed to make a **real difference**.



Call for Code  
Creator



Call for Code  
Founding Partner



Call for Code  
Charitable Partner



Call for Code  
Program Affiliate

Call for Code has become the only global, **always-on** tech for good Open-Source platform to deploy & scale top projects through a host of offerings:

## Why join?

- Skill Building
- Social Good
- Ideas to Action
- Community (400K+ developers, 179 nations, 15K+ applications)

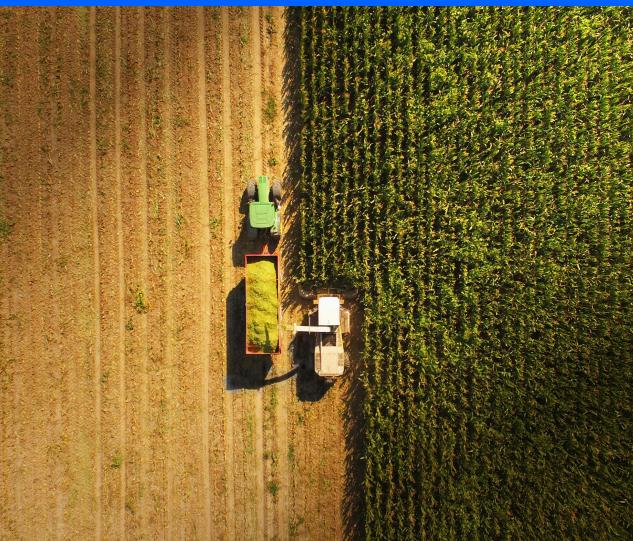
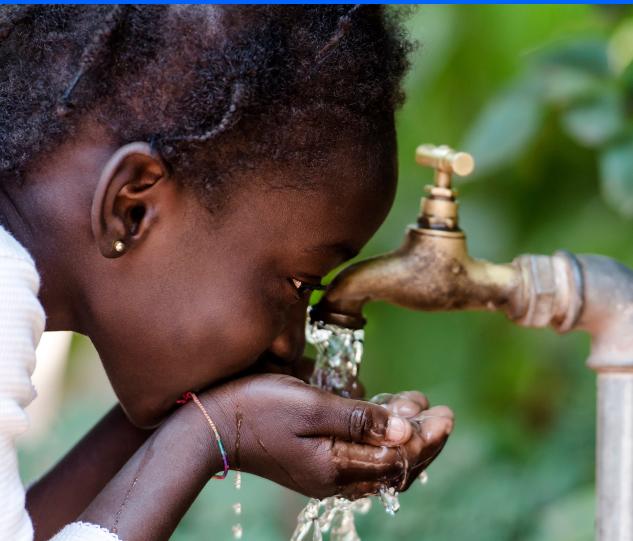
## Sponsors



## Awards

- 200K USD** for Global Challenge winner  
**10K USD** for University Challenge winner  
**5K USD** for Middle East and Africa region winner

# 2021 Call for Code fighting CLIMATE CHANGE



## Clean Water and Sanitation

Water is the natural resource that is most threatened by climate change and a prerequisite for life on earth. From intelligent solutions for small farmers to recycling showers, **technology** can make a significant impact on the **availability of water and its consumption**.

## Zero Hunger

135 million people suffer from acute hunger, with climate change a major contributing factor. **Technology** can **help grow more crops in areas on the edge of drought** or quickly **distribute perishables** from small stores to local homeless shelters.

## Responsible Production and Consumption

Worldwide consumption and production drives the global economy yet is inextricably linked to the environment. **Technology** can help **make recommendations on energy efficiency** to highlighting the carbon footprint of online purchases.

# Resources and Events

Call for Code Main Page: [ibm.biz/callforcode](http://ibm.biz/callforcode)

FAQs: [callforcode.org/faq/](http://callforcode.org/faq/)

Starter Kits: [Zero Hunger, Clean Water and Sanitation, Responsible production and green consumption](#)

Office hours **Every Monday**  
from 2 PM to 3 PM GST (Dubai time)  
[crowdcast.io/e/mea\\_cfc\\_officehours](http://crowdcast.io/e/mea_cfc_officehours)

Join our MEA Call for Code Slack channel:  
[ibm.biz/mea\\_cfc\\_slack\\_channel](http://ibm.biz/mea_cfc_slack_channel)



Get notified for upcoming Call for Code events  
by following our Meetup Page:  
[meetup.com/IBM-Cloud-MEA/](http://meetup.com/IBM-Cloud-MEA/)



Go to our Crowdcast page for replays of  
previous events that could help you:  
[crowdcast.io/ibmdeveloper](http://crowdcast.io/ibmdeveloper)

# Digital Developer Conference

# Data & AI

**Learn industry-recognized data and AI skills from IBM experts, partners, and the worldwide community**

Register for free and get ready to build smart and secure data and AI solutions with a focus on experimentation, eminence, and education. The IBM Developer ecosystem of experts, enthusiasts, and client partners have created a robust conference experience focused on exploring AI-centric solutions and platforms—dedicated to the worldwide community of developers, data scientists, and academia.

Conference begins  
June 8

Learn more and register for free at [ibm.biz/devcon-ai](https://ibm.biz/devcon-ai).



**On-demand replays available after the event**

# Useful Links

Learn - develop - connect

**Get Started Here** (<http://ibm.biz/CR-Modeler>)

**Hands-On Lab** (<http://ibm.biz/cr-modeler-repo>)

**IBM Developer** (<https://developer.ibm.com/>)

**Meetup** (<https://www.meetup.com/IBM-Cloud-MEA/>)

Thank you.

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