The Intel DataHack Open Challenge: AI for Social Good

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AI ROLES AT INTEL

Enabling the AI Market

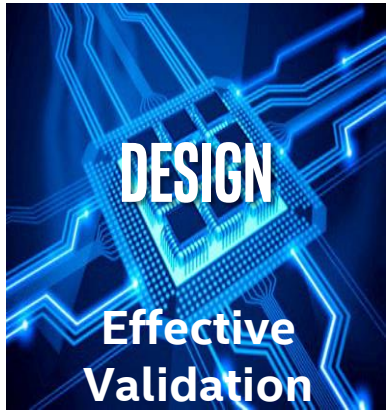
Using AI to Make Smart Products

Using AI to Transform Our Own Operations

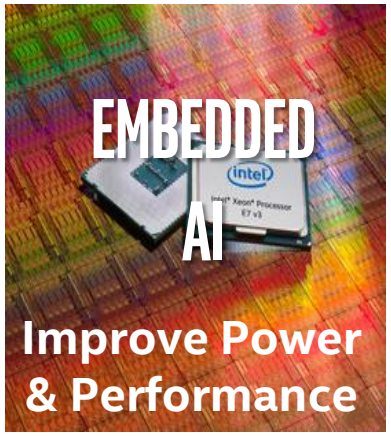
INTEL'S ADVANCED ANALYTICS DEPARTMENT

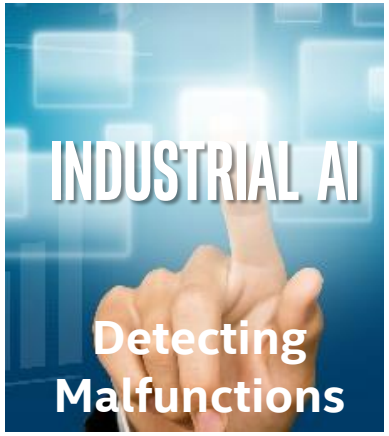
A GROUP OF 150 DATA-SCIENTISTS, BIG DATA DEVELOPERS AND PRODUCT EXPERTS LOCATED IN ISRAEL: PETACH-TIKVA, HAIFA, KIRYAT-GAT, JERUSALEM

TRANSFORMING INTEL'S OPERATIONS



BUILDING SMART PRODUCTS & ENABLING THE AI MARKET





AI FOR SOCIAL GOOD AT INTEL

Intel took a commitment to advance uses of AI that most positively impact our world

- Support social good organizations with AI technologies and expertise, to accelerate their positive work in the world

- Focusing on the fields of Environment, Healthcare and Society

kaggle

Intel® & MobileODT
Cervical Cancer Screening

INTEL'S AI FOR SOCIAL GOOD INITIATIVE: CURRENT PROJECTS

HACK HARASSMENT

Intel collaborates with Vox Media, Re/code, and Born This Way Foundation on an initiative to increase inclusivity online and fight online harassment with machine learning.

Learn More

NCMEC

Intel works with the National Center for Missing and Exploited Children, to help automate complex image analysis to identify exploited children and suspects.

Learn More

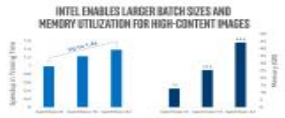
FIGHT ONLINE CHILD EXPLOITATION

Intel is partnering with Thorn to create technology powered by deep learning and Intel AI tools to identify missing and exploited children in images.

Learn More

ASSISTING THE WORLD BANK

The World Bank Development Data Group utilized Intel's BigDL framework and Intel Xeon processors to classify images of household goods and services to aid the World Bank in its mission to reduce poverty and promote sustainability.



CERVICAL CANCER SCREENING

Intel is partnering with MobileODT on a competition for developing an algorithm to identify cervix types based on images, to prevent ineffectual treatment and help healthcare providers give proper referrals.

Learn More

Read the Blog

IMPROVING RADIOLOGY

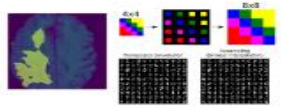
CT image specialists teamed with Intel to use Intel's Deep Learning Deployment Toolkit and Intel Xeon processors for deep learning medical image solutions that can make medical imaging more affordable and more effective for diagnosing illness and assessing results.

Read the Blog

PRECISION MEDICINE

An AI-based solution running on Intel Xeon processors has been deployed in hospitals for precision medicine applications for more individualized treatment. The solution helps improve the workflow of radiologists so that they may provide better care to patients.

Read the Blog



TUMOR DETECTION

Using Intel Xeon processor-based systems to work with large medical images, deep learning is used to train models to quickly detect tumors.

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GENOMICS RESEARCH

Intel and Synthetic Genomics, Incorporated (SGI) use deep learning to gain new insights on protein sequences tagging.

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SKIN CANCER DETECTION

Physicians use the Intel® Movidius Neural Compute Stick (NCS) to help with screenings for patients without waiting time. NCS has the potential to help provide medical care to people in remote locations.

Learn More

BRAIN IMAGING ANALYSIS

In collaboration with the Princeton Neuroscience Institute, Intel helps use software to monitor brain activity to better decode human thoughts and advance neurocognitive therapy for mental illness.

Learn More

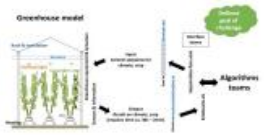
CLASSIFYING OSTEOARTHRITIS

The Center for Digital Health Innovation (CDHI) built an AI-powered MRI classification system with BigDL: Distributed Deep Learning that may help radiologists decode MRIs of potential osteoarthritis cases.

ICEBERG CLASSIFIER CHALLENGE

Intel won Kaggle's Statoil/C-CORE Iceberg Classifier Challenge by creating an algorithm to classify ships vs. icebergs. The ability to classify icebergs helps create safer sea travel especially in remote areas and harsh weather conditions.

Read the Blog



AUTONOMOUS GREENHOUSE CHALLENGE/DEEP GREENS

A team of Intel AI data scientists use Deep Reinforcement Learning Algorithm for an autonomous greenhouse maximizes yield and minimizes resources.

Read the Blog

SPACE EXPLORATION RESEARCH

Researchers use Intel deep learning technologies and resources along with mentorship from Intel engineers to explore problems that may affect Earth.

Read the Blog

Read the News

NONINVASIVE ARCTIC RESEARCH

The Intel Falcon 8+ drone is being used to study polar bears in the arctic. The use of drones is safer for researchers and provides less threatening research methods for studying polar bears in their natural environment.

Learn More

OCEAN ALLIANCE WHALE RESEARCH

Intel and Parley for the Oceans collaborate on a noninvasive way to study whales in the oceans by collecting snot from whale blow holes using Intel SnotBots to be analyzed for stress and pregnancy hormones, viruses, bacteria, and toxins.

GREAT WALL OF CHINA RESTORATION

Intel Falcon 8+ drones shoot high resolution aerial photographs which can be processed into highly accurate 3D models of the Great Wall of China. The AI algorithm identifies damage in the wall and provides guidance for repairs.

PROTECTING HALBERSTADT CATHEDRAL

Intel supported Bauhaus University to protect the 15th century Halberstadt Cathedral by using Falcon 8+ drones to capture structural data for repairs. The drones help collect the data without the risk of damage from physical contact.

DETECTING WATER CONTAMINATION

Intel AI Academy innovator applies AI techniques to detect harmful bacteria in water using the Intel(R) Movidius Neural Compute Stick (NCS).

See: https://ai.intel.com/ai4good/

YOUR MISSION: USE AI FOR SOCIAL GOOD

- Your project may use any available dataset
  - Some interesting relevant datasets can be found here: https://github.com/shreyashankar/datasets-for-good

- Key criteria for evaluation:
  - Potential impact on social good
  - Technical quality of the project
  - Level of innovation (in the idea and/or in the solution)

- Each member of the winning team will be awarded a prize

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Questions?

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Thank you!