

Final Project Goal



- **[Skill]** Use Jetson Nano to run “real” Deep Learning models
- **[Knowledge]** Apply knowledge you learn about deep learning (especially CNNs) to make your own application
- **[Novelty]** Invent an interesting AI application that can solve a real-world problem

Course Information

- No textbook. All study materials will be provided
 - Lecture notes (uploaded to LMS before each class starts)
 - Lab materials (uploaded to LMS)
 - Suggested reading for more info (not required)
 - Practical Deep Learning for Cloud, Mobile, and Edge
(Anirudh Koul, Siddha Ganju, Meher Kasam; O'Reilly)



- Teamwork for Labs and Projects
 - Work in a team of 2 members
 - Email TA for your team preference
 - Or we will make teams for you 😊
 - NVIDIA Jetson Nano board will be provided per team
 - Need to return the board at the end of semester!



[NVIDIA Jetson Nano board](#)

Final Project Goal



Jungwook Choi

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Final Project Examples



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- Jetson Community Projects

<https://developer.nvidia.com/embedded/community/jetson-projects> (Ex 1, Ex 2)

The screenshot shows a Chrome browser window displaying the NVIDIA Developer website at <https://developer.nvidia.com/embedded/community/jetson-projects>. The page is titled "Community Gallery" and features several project thumbnails. The projects shown are:

- DESCRIPTIVE AI** by D KENDRI: A street scene with green bounding boxes and text overlays.
- MONITORING WITH JETSON NANO** by R LO: A monitoring interface showing a stick figure and a video feed.
- POSE ESTIMATION ON JETSON WITH OPENPIPPAF** by GALIDIT: A street scene with people and a "Happy Counter" value of 78.
- Hand Gesture Recognition**: A collage of images showing hand gestures and their corresponding neural network visualizations.
- Face Detection**: A video feed showing people with green bounding boxes around their faces.
- Object Detection**: A diagram illustrating the object detection process from a video frame to a bounding box.

At the bottom of the page, there is a cookie consent banner from NVIDIA.

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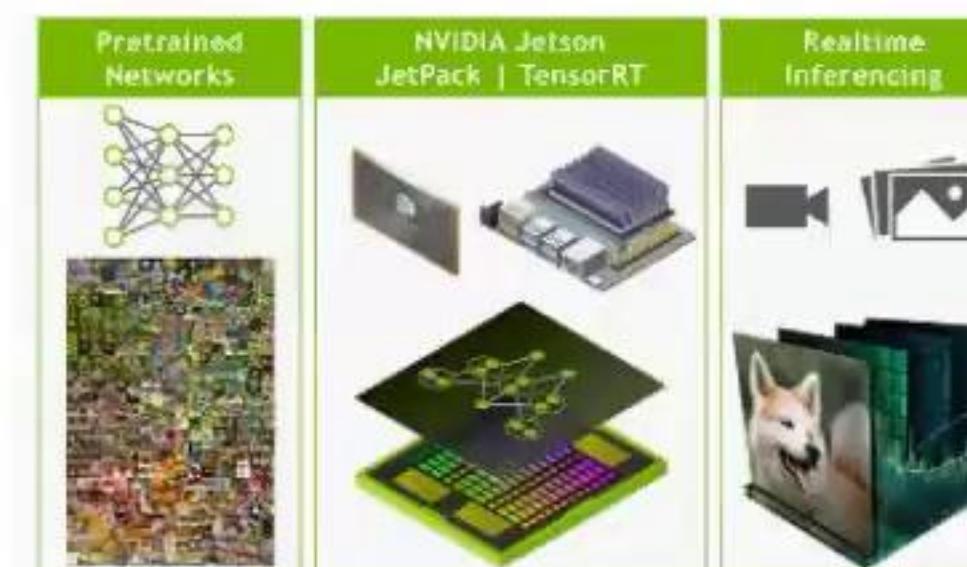
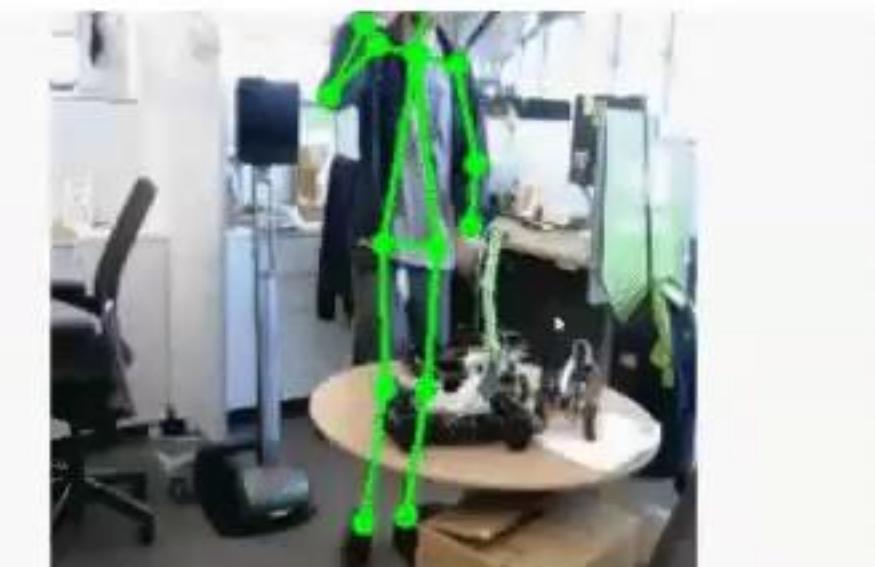
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Get Started with these Projects

[Jetbot](#)[Hello AI World](#)[JetRacer](#)[Real-time Human Pose Estimation](#)



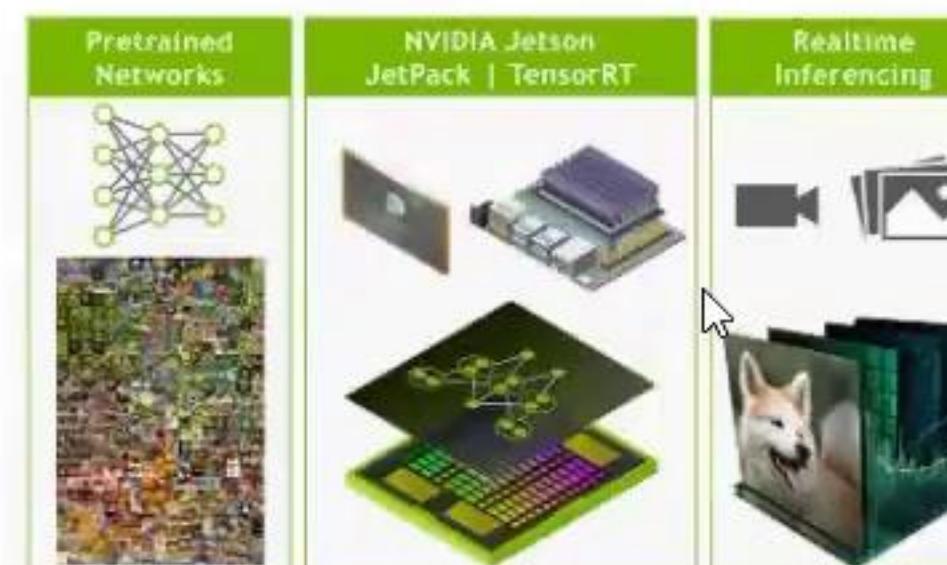
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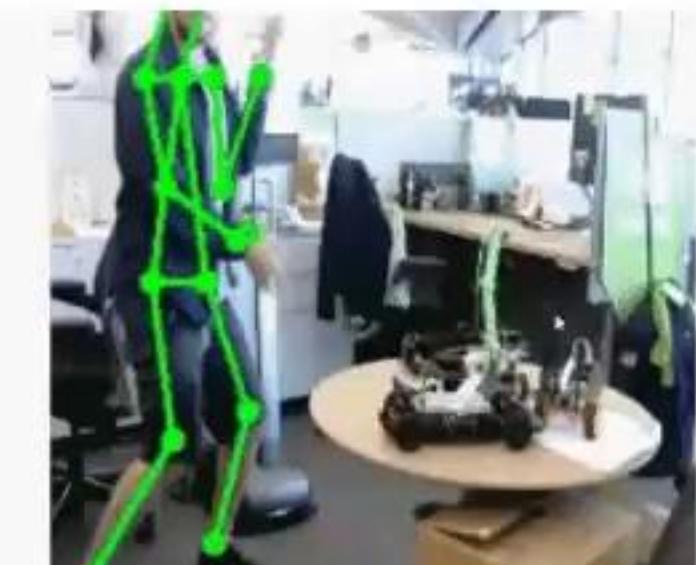
Jetbot



Hello AI World



JetRacer

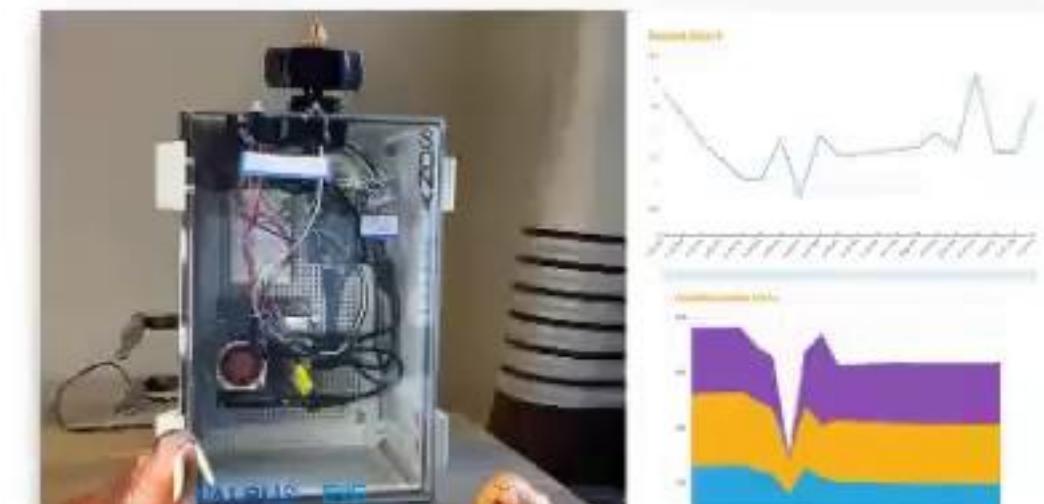


Real-time Human Pose Estimation

Filters

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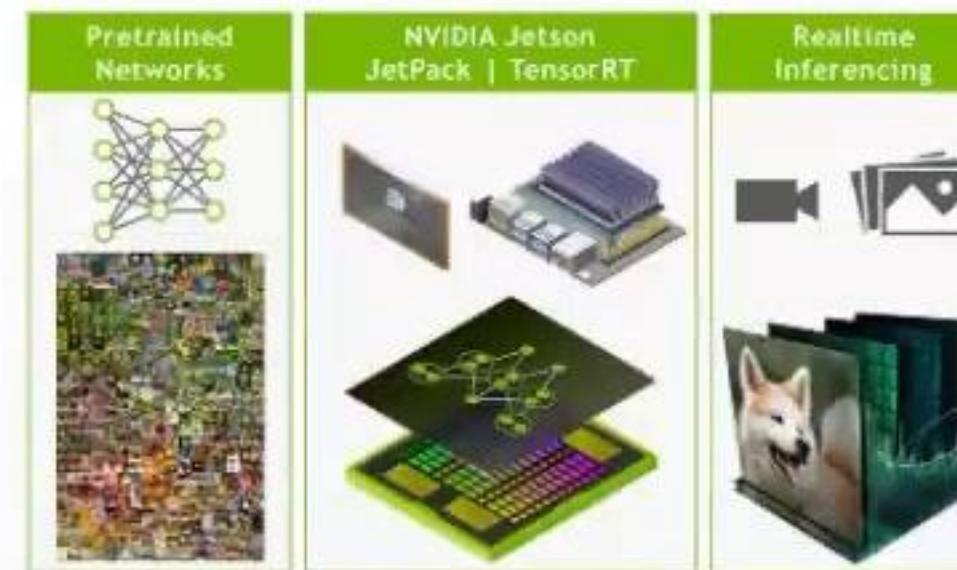
Works with...



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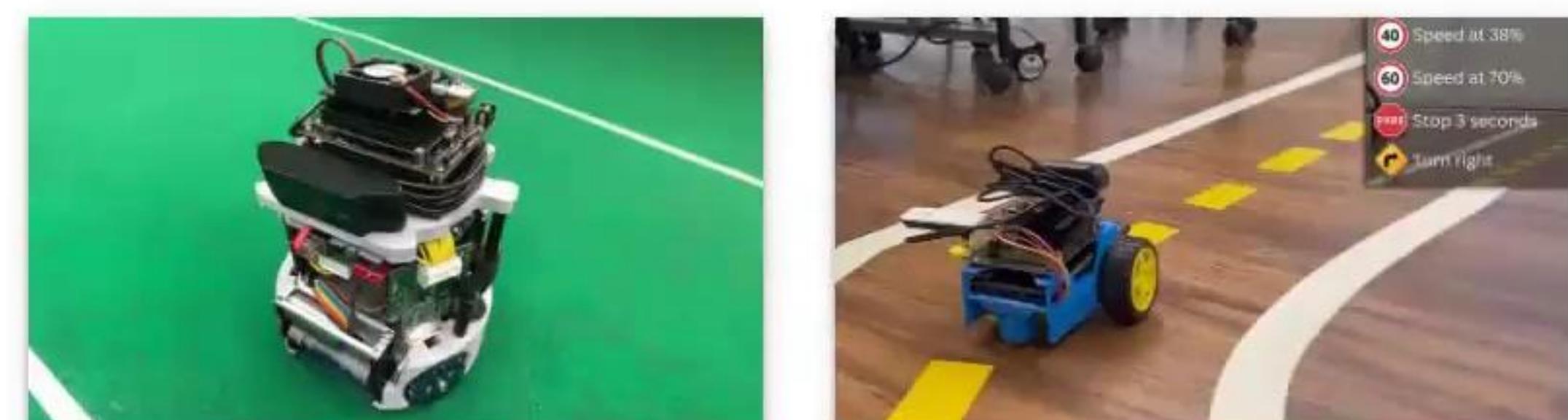
- Jetson AGX Orin
- Jetson AGX Xavier
- Jetson Nano



Project of the Month July 2022

SSL-Detector

João G. Melo



Nvidia HPC Autopilot

E Neto



WalrusEye

R Singh

Filters

Works with...

- Jetson AGX Orin
- Jetson AGX Xavier
- Jetson Nano
- Jetson Nano 2GB
- Jetson Orin NX
- Jetson TX2
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NVIDIA Frameworks

- CUDA

Found 189 results



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SSL-Detector

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JetClean

C Bendig Mundbjerg-Sunne

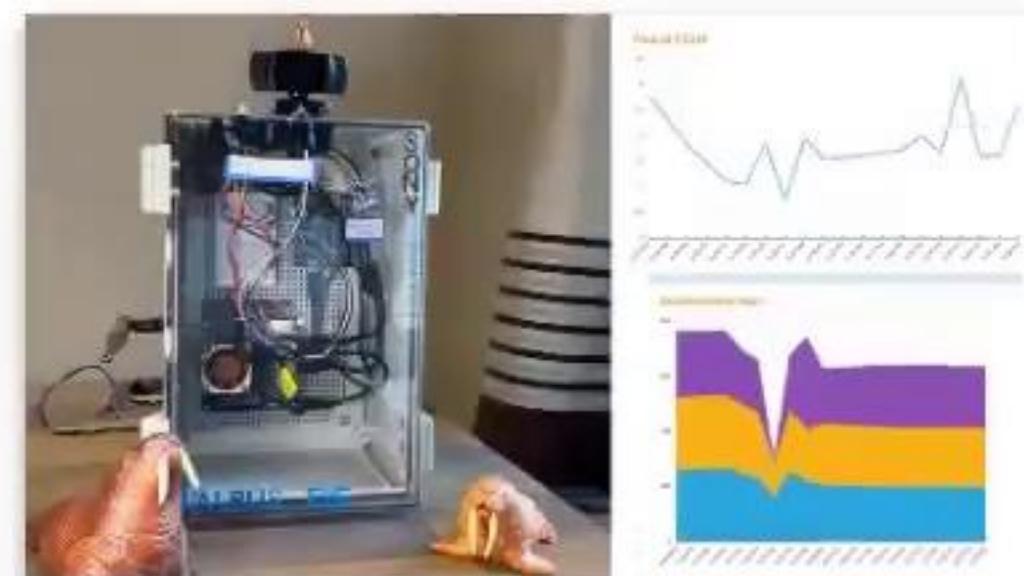


Nvidia HPC Autopilot

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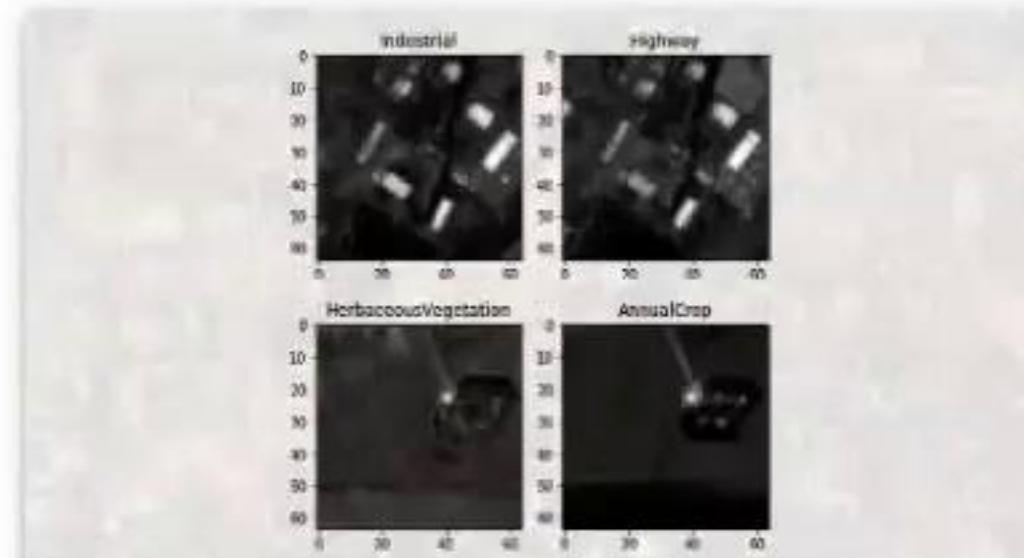


YOLO-ReT: Towards High Accuracy Real-time Object Detection on Edge



WalrusEye

R Singh



NYC Land Cover Pseudo-segmentation and Analysis



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WORKS WITH...

- Jetson AGX Orin
- Jetson AGX Xavier
- Jetson Nano
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- Jetson Orin NX
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- Jetson Xavier NX

NVIDIA Frameworks

- CUDA
- DeepStream SDK
- Isaac ROS
- NVIDIA TAO Toolkit
- NVIDIA TLT
- TensorFlow

Project of the Month July 2022

SSL-Detector
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Nvidia HPC Autopilot
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Qualitative Heatmap Study

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NVIDIA Frameworks

- CUDA
- DeepStream SDK
- Isaac ROS
- NVIDIA TAO Toolkit
- NVIDIA TLT
- TensorFlow
- TensorRT

Public Frameworks

- Caffe
- Darknet
- dlib
- Keras
- ncnn

JetClean
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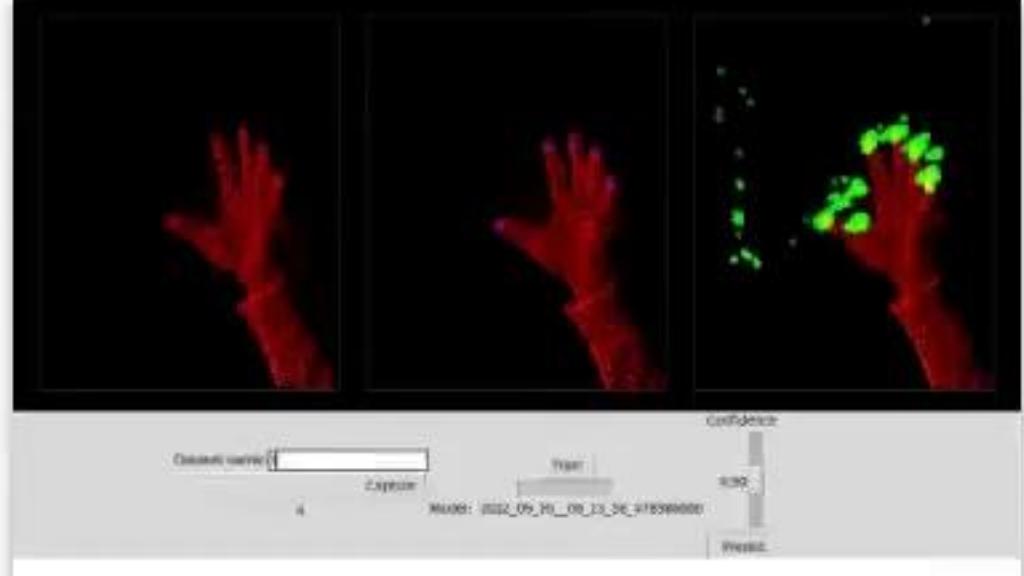
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P Ganesh



NYC Land Cover Pseudo-Segmentation and Analysis
N Kasmanoff



3D Recognizer
M Verstraete



Autonomous Off-Road Laz Boy Robot
D Niewinski



ROBOT ARM that Launches Fireworks! - Canada Day Special
D Niewinski



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tensorRT

Public Frameworks

- Caffe
- Darknet
- dlib
- Keras
- ncnn
- oneAPI
- ONNX
- OpenCV
- OpenPose
- PyTorch
- ROS
- TensorFlow

3D Recognizer
M Verstraete

Autonomous Off-Road La Z Boy Robot
D Niewinski

ROBOT ARM that Launches Fireworks! - Canada Day Special
D Niewinski

Autonomous Robot Bin
J Bruton, Xrobots

CameraBot: Auto Cameraman Robot Follows YOU
J Bruton, Xrobots

JetAuto ROS Robot
Hiwonder

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dlib
 Keras
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Autonomous Robot Bin
J Bruton, Xrobots

CameraBot: Auto Cameraman Robot Follows YQ!
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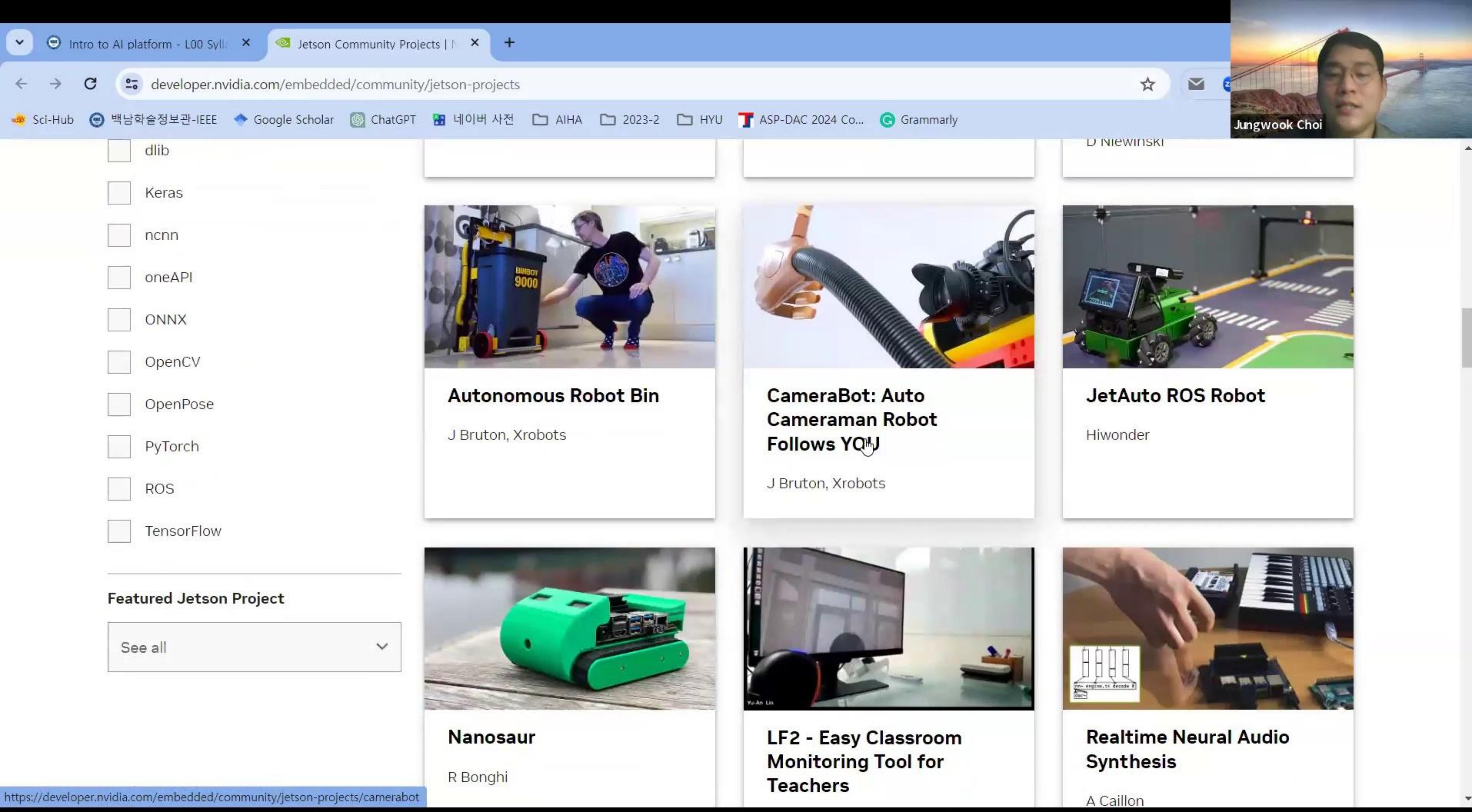
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Nanosaur
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LF2 - Easy Classroom Monitoring Tool for Teachers

Realtime Neural Audio Synthesis
A Caillon



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OpenCV
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 PyTorch
 ROS
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PyTorch

ROS

TensorFlow

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D Lin

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A Caillon

Shanten Calculator

Project of the Month February 2022

Table:

bus_number	Column A	Column B
bus_1	9:08:12	9:08:27
bus_2	9:19:33	9:21:01
bus_3	9:32:39	9:36:57
bus_4	9:45:17	9:48:27
bus_5	9:59:22	10:01:23
bus_6	10:12:53	10:13:47
bus_7	10:25:57	10:27:03
bus_8	10:39:28	10:38:33
bus_9	10:52:51	10:52:45
bus_10	11:04:45	11:08:51
bus_11	11:16:32	11:27:45
bus_12	11:30:29	11:42:32

Project of the Month May 2022

Shanten Calculator

Carrotman Robot Follows YOU

J Bruton, Xrobots

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JetRacer

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- Jetson Nano
- Jetson Nano 2GB
- Jetson Orin NX
- Jetson TX2

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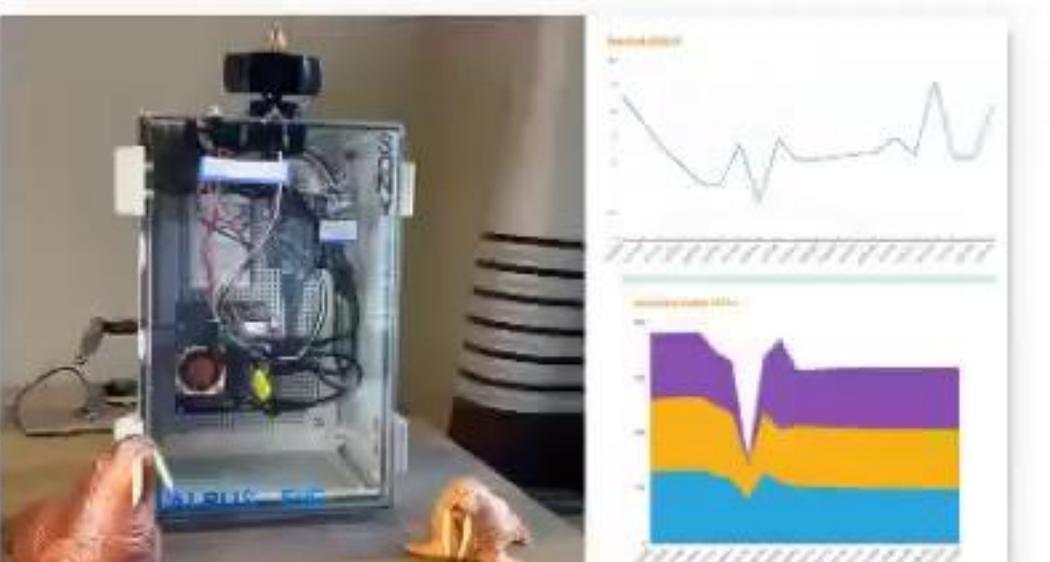
SSL-Detector

João G. Melo



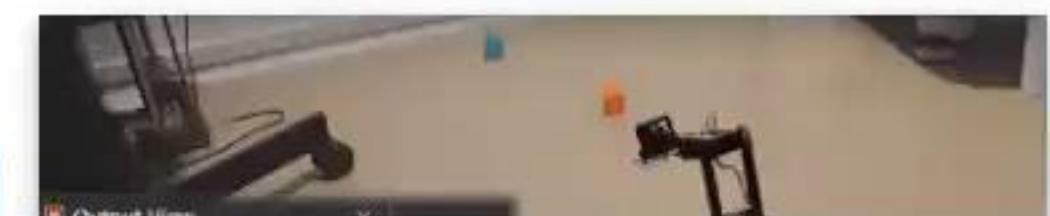
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Qualitative Heatmap Study



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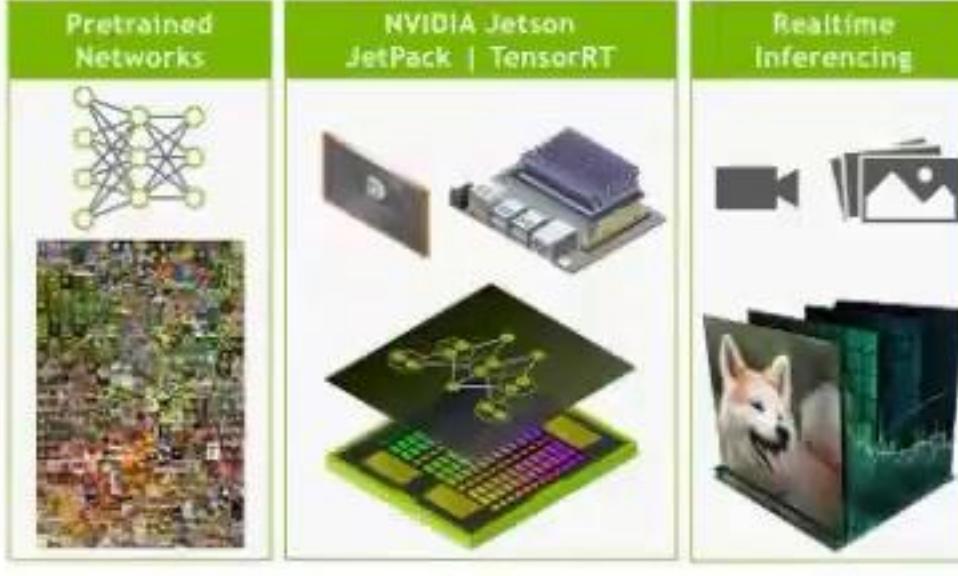
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Pretrained Networks

NVIDIA Jetson JetPack | TensorRT

Realtime Inferencing



JetRacer



Real-time Human Pose Estimation

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Works with...

Jetson AGX Orin

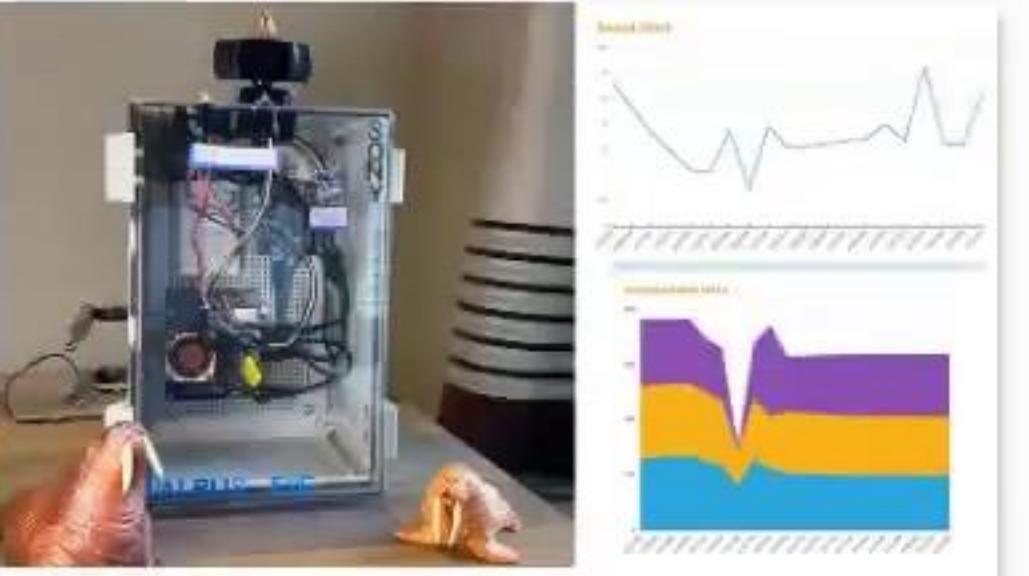
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Nvidia HPC Autopilot



WalrusEye

https://developer.nvidia.com/embedded/community/jetson-projects/hpc_autopilot



Real-time Human Pose Estimation

This project features multi-instance pose estimation accelerated by [NVIDIA TensorRT](#). It is ideal for applications where low latency is necessary. It includes:

- Training scripts to train on any keypoint task data in MSCOCO format
- A collection of models that may be easily optimized with TensorRT using torch2trt



This project can be used easily for the task of human pose estimation, or extended for something new.

Authors

NVIDIA

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Works with...

Jetson Nano

Jetson AGX Xavier

Jetson TX2

Jetson Xavier NX

Jetson Nano 2GB

Jetson Orin NX

Jetson AGX Orin

Resources

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Resources



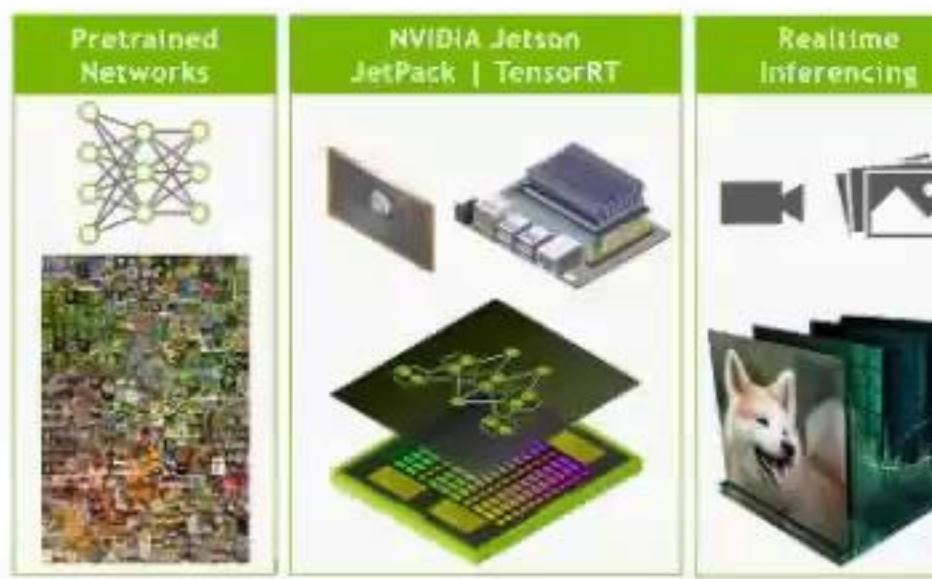
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Jetbot



Hello AI World



JetRacer



Real-time Human Pose Estimation

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NVIDIA Frameworks

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Project of the Month July 2022

SSL-Detector
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Nvidia HPC Autopilot
E Neto

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P Ganesh

NYC Land Cover Pseudo-segmentation and Analysis
N Kasmanoff

3D Recognizer

Autonomous Off-Road Land Rover

ROBOT ARM that can Detect and Avoid Obstacles

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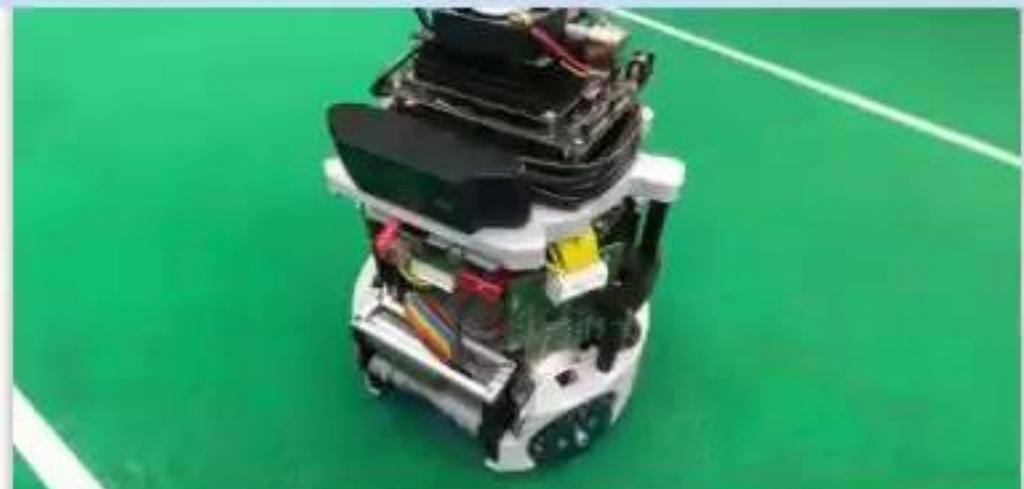
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NVIDIA Frameworks

- CUDA
- DeepStream SDK
- Isaac ROS
- NVIDIA TAO Toolkit



Project of the Month July 2022

SSL-Detector

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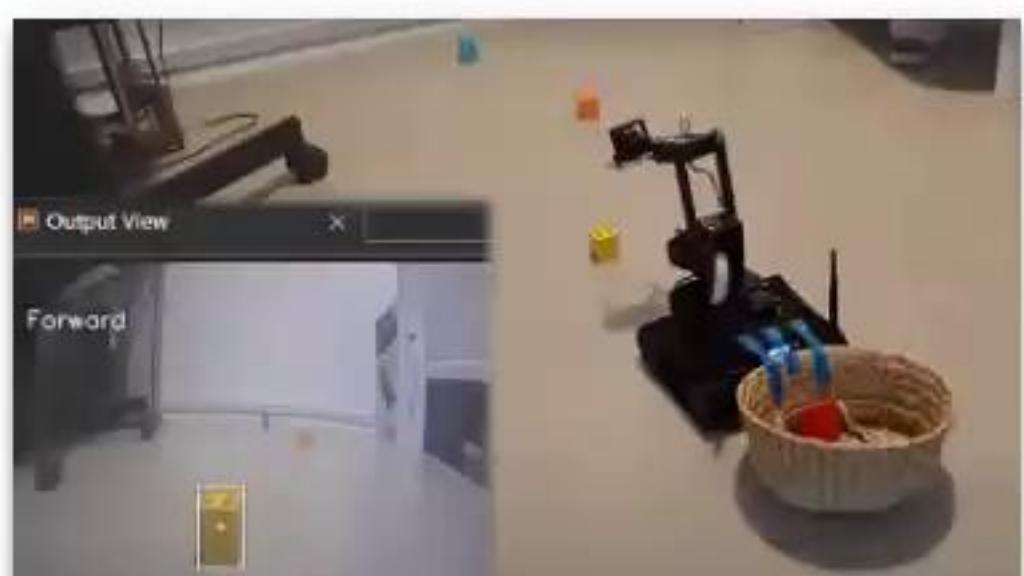
Nvidia HPC Autopilot

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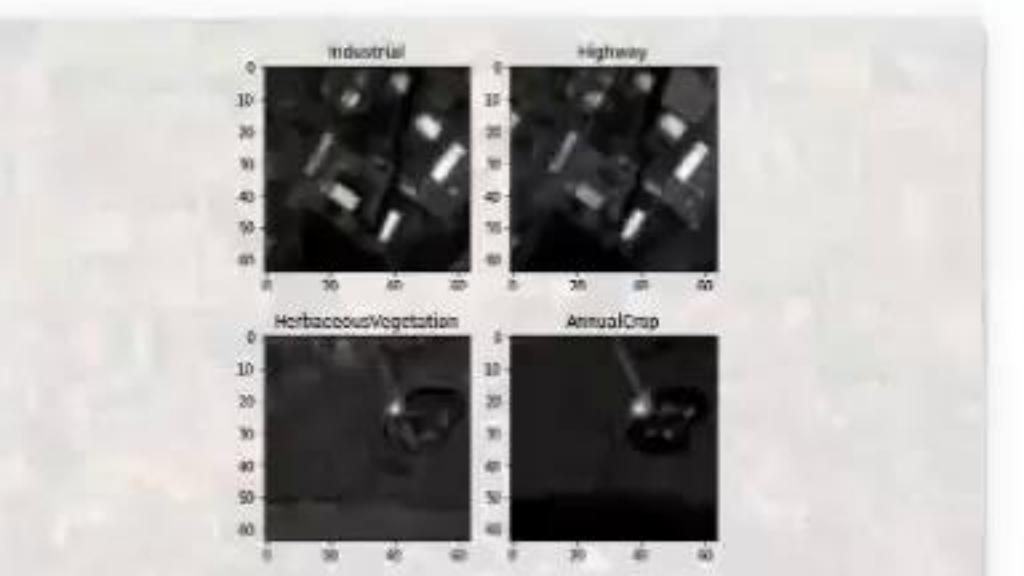
JetClean

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LF2 - Easy Classroom Monitoring Tool for Teachers
D Lin



Realtime Neural Audio Synthesis
A Caillon



Project of the Month February 2022

Bus Prediction
E Gomtsyan



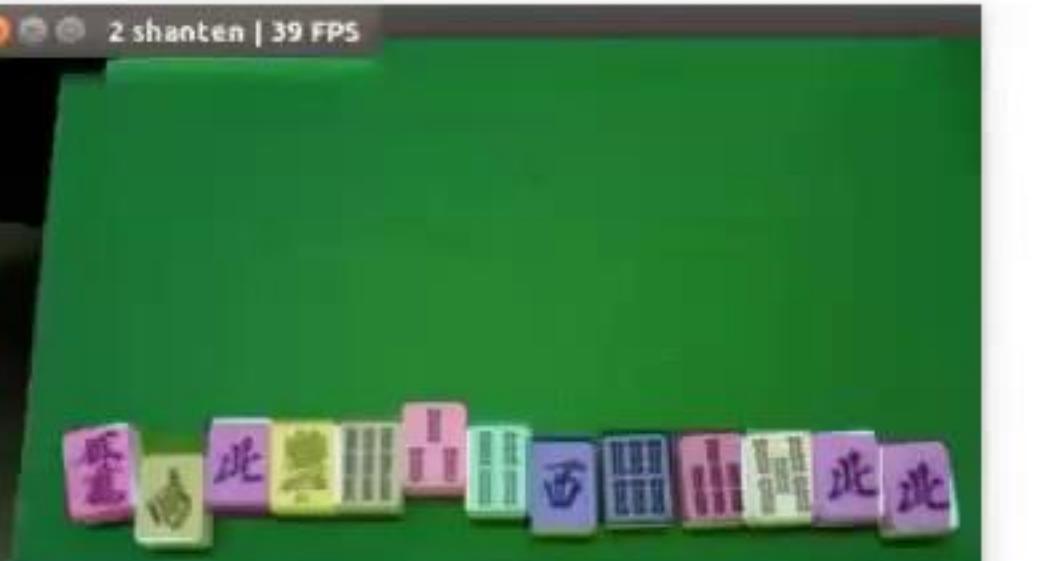
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Project of the Month May 2022

Bird@Edge
J Höchst, H Bellafkir, P Lampe, M Vogelbacher, M Mühling, D



Shanten Calculator
Toshiki H



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Nanosaur
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D Lin



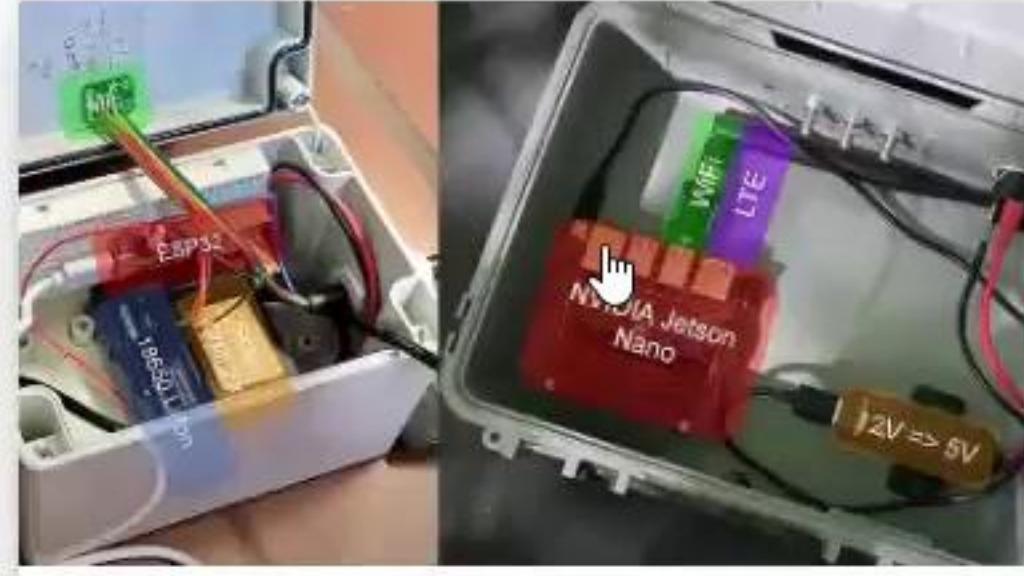
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Project of the Month February 2022

Bus Prediction
E Gomtsyan



Project of the Month May 2022

Bird@Edge

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Shanten Calculator
Toshiki H

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Bus Prediction

E Gomtsyan

bus	arrive	depart
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bus_10	11:04:45	11:08:51
bus_11	11:16:32	11:27:45
bus_12	11:30:29	11:42:32

Bird@Edge

J Höchst, H Bellafkir, P Lampe, M Vogelbacher, M Mühling, D Schneider, K Lindner, S Rösner, D Schabo, N Farwig, B Freisleben

Project of the Month May 2022

Bird@Edge

J Höchst, H Bellafkir, P Lampe, M Vogelbacher, M Mühling, D Schneider, K Lindner, S Rösner, D Schabo, N Farwig, B Freisleben

Shanten Calculator

Toshiki H

Prevent Injuries During Saw Operation with Jetson Nano

Banknote Counter

Steinheilig

Guitar chord detection

R Waltzer

https://developer.nvidia.com/embedded/community/jetson-projects/banknote_counter ngyi ZHU

Intro to AI platform - L00 Syllabus X Bus Prediction | NVIDIA Developer +

developer.nvidia.com/embedded/community/jetson-projects/bus_prediction

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bus_number	Column A	Column B
bus_1	9:06:12	9:08:27
bus_2	9:19:33	9:21:01
bus_3	9:32:39	9:36:57
bus_4	9:45:17	9:48:27
bus_5	9:59:22	10:01:23
bus_6	10:12:53	10:13:47
bus_7	10:25:57	10:27:03
bus_8	10:39:28	10:38:33
bus_9	10:52:51	10:52:45
bus_10	11:04:45	11:08:51
bus_11	11:16:32	11:27:45
bus_12	11:30:29	11:42:32

Bus Prediction

Predict bus arrival times with Jetson Nano. You can detect bus arrivals by locally processing a video stream from a simple camera connected via RTSP. Starting from a pretrained ImageNet model, capture images of passing buses and use them to refine the model so it can distinguish between scheduled and unscheduled buses in several weather conditions. Detected bus arrival times are logged and a predictive schedule is generated with GCP and BigQuery using Vertex AI. The arriving bus schedule can be communicated using Google IoT and home IoT devices such as Alexa.

Works with...

Jetson Nano

Authors

E Gomtsyan

Resources

View project repository

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Jetson Community Projects | 1

developer.nvidia.com/embedded/community/jetson-projects

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Prevent Injuries During Saw Operation with Jetson Nano
Hongyi ZHU

Banknote Counter
Steinheilig

Guitar chord detection
R Waltzer

Fruit Quality Control with Jetson Nano
Aprende e Ingenia

Pytorch Driving Guardian
L Arevalo Oliver

Project of the Month January 2022
Mariola
T Tomanek

People Flow Analysis System
Ryoyo

Project of the Month March 2022
ROS, RTABMAP & Detectron2 Racecar
S Saha

Handwriting Classifier with Docker, Jetson Nano and Flask
I El Hanafi

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The screenshot shows a web browser displaying the "Jetson Community Projects" page. The page features six project cards arranged in two rows of three. Each card includes a thumbnail image, the project title, the author's name, and a small bio or description.

- Prevent Injuries During Saw Operation with Jetson Nano** by Hongyi ZHU: A thumbnail shows hands operating a power saw with a green neural network overlay. The project aims to prevent injuries during saw operations using Jetson Nano.
- Banknote Counter** by Steinheilig: A thumbnail shows a robotic arm with a camera mounted on it, positioned over a stack of Euro banknotes. The project is a banknote counter.
- Guitar chord detection** by R Waltzer: A thumbnail shows a person's hands playing a guitar, with a digital interface overlay showing a guitar neck diagram and notes.
- Fruit Quality Control with Jetson Nano** by Aprende e Ingenia: A thumbnail shows a smartphone displaying a real-time fruit quality control application. The app interface includes a banana image with a quality score of 78% and a button labeled "MANZANA 20%".
- Pytorch Driving Guardian** by L Arevalo Oliver: A thumbnail shows a person driving a car while looking at a small screen on the dashboard displaying a video feed from a camera mounted on the steering wheel.
- Mariola** by T Tomanek: A thumbnail shows a mobile robot with a screen displaying a video feed, positioned in a room with other equipment.

https://developer.nvidia.com/embedded/community/jetson-projects/pytorch_guardian

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developer.nvidia.com/embedded/community/jetson-projects

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Prevent Injuries During Saw Operation with Jetson Nano

Hongyi ZHU

Banknote Counter

Steinheilig

Guitar chord detection

R Waltzer

Fruit Quality Control with Jetson Nano

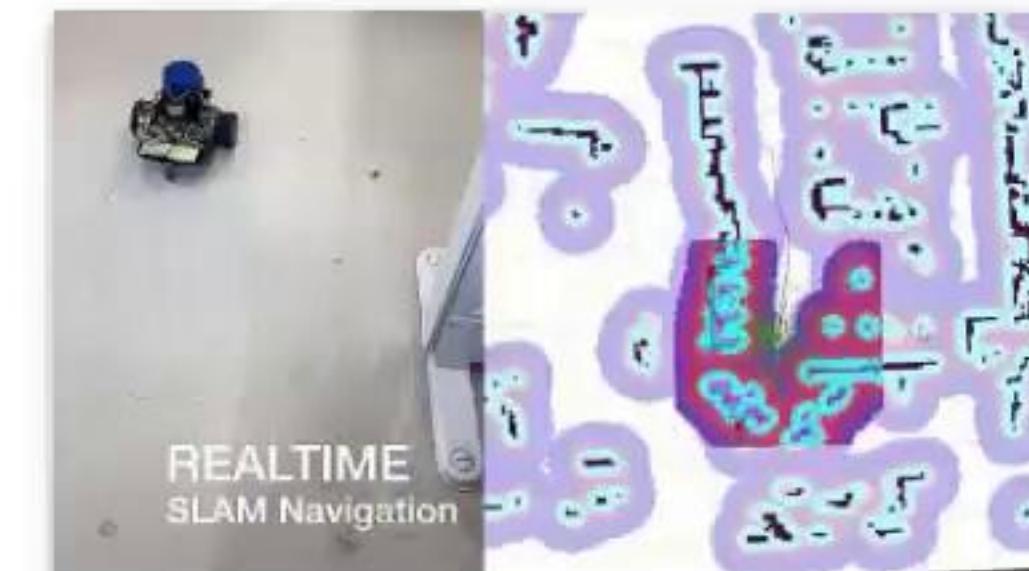
Aprende e Ingenia

Pytorch Driving Guardian

L Arevalo Oliver

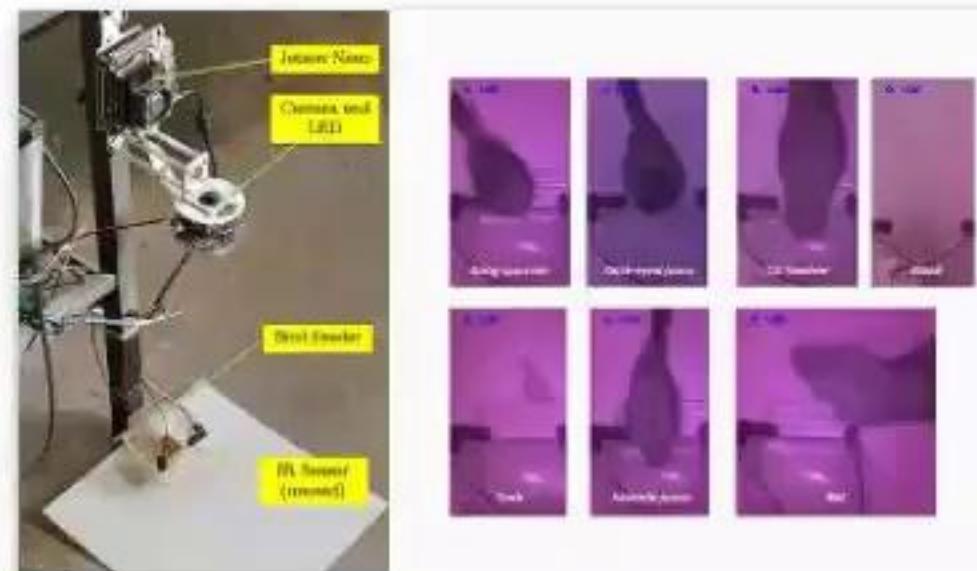
Mariola

T Tomanek



R1mini ROS2 SLAM Mapping and Navigation

OMOROBOT (Open Mobile Robot)



P Lertvilai



Ellee: A Talking Teddybear Powered by GPT-3 & Computer Vision

A Nalwan

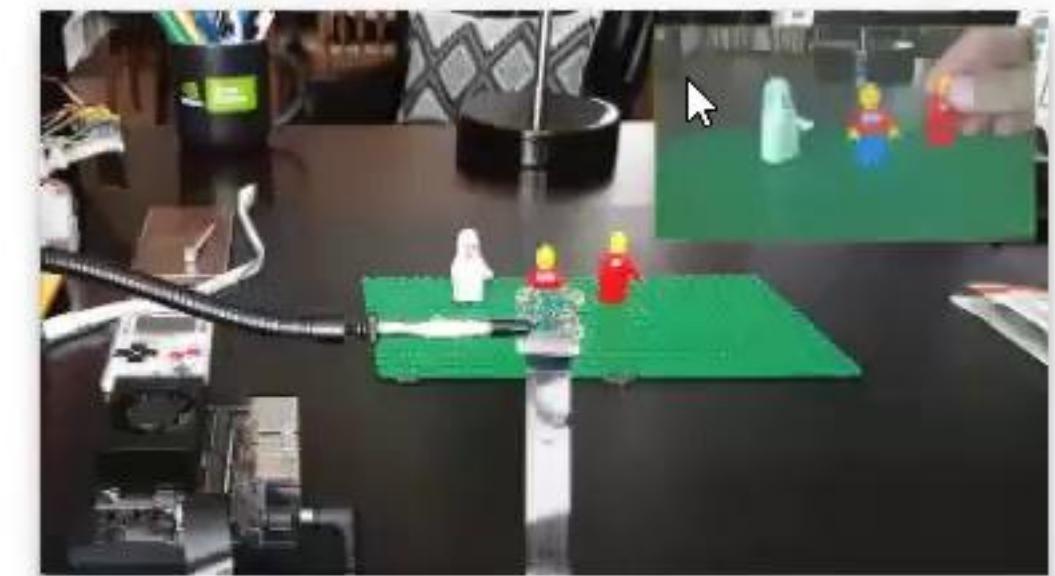


Green Iguana Detection and Surveillance

R Hsu, MetAI



D Niewinski



N Bild

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developer.nvidia.com/embedded/community/jetson-projects

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The screenshot displays a grid of nine project cards from the Jetson Community Projects website. Each card includes a thumbnail image, the project title, the author's name, and a brief description.

- R1mini ROS2 SLAM Mapping and Navigation** by OMOROBOT (Open Mobile Robot): A screenshot of a mobile robot navigating through a complex, colorful environment, overlaid with a map showing its path.
- BirdCam** by P Lertvilai: An image of a camera setup mounted on a tripod, with three small purple video frames showing bird identification results.
- Ellee: A Talking Teddybear Powered by GPT-3 & Computer Vision** by A Nalwan: A video frame showing a person interacting with a teddy bear, with a speech bubble saying "Really? I also love dogs too".
- Green Iguana Detection and Surveillance** by R Hsu, MetAI: A screenshot of a dashboard showing a live video feed of iguanas and a line graph of detection data over time.
- Weed Killing Robot** by D Niewinski: A photograph of a black and orange tracked robot equipped with a white cylindrical sprayer arm, positioned in a grassy field.
- Go Motion** by N Bild: A photograph of a robotic arm with a gripper holding a small green object, with a hand visible in the background.
- REALTIME SLAM Navigation** by OMOROBOT (Open Mobile Robot): A screenshot of a mobile robot navigating through a complex, colorful environment, overlaid with a map showing its path.
- Ellee: A Talking Teddybear Powered by GPT-3 & Computer Vision** by A Nalwan: A video frame showing a person interacting with a teddy bear, with a speech bubble saying "Really? I also love dogs too".
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Jungwook Choi

Self-Driving-ish Computer Vision System
iwatake

JetMax
Hiwonder

BabyWatcher
S Nakano

Cat Laser Turret Robot
D Niewinski

LabSentinel
N Maas

Project of the Month December 2021
Neurorack: A Deep AI-based Eurorack Synth
N Devis

<https://developer.nvidia.com/embedded/community/jetson-projects/neurorack>

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R Hsu, MetAI

The screenshot shows a grid of six project cards on the Jetson Community Projects website:

- Self-Driving-ish Computer Vision System** by iwatake: A car dashboard view with a heads-up display showing sensor data.
- JetMax** by Hiwonder: A robotic arm with a camera mounted on it, positioned next to a red cup and a small tree model.
- BabyWatcher** by S Nakano: A camera view of a baby in a crib, overlaid with a grid of small video frames showing different angles of the baby.
- Cat Laser Turret Robot** by D Niewinski: A cat walking towards a robotic laser turret mounted on a desk.
- LabSentinel** by N Maas: A schematic diagram of a power monitoring circuit connected to a BeagleBoard.
- Neurorack: A Deep AI-based Eurorack Synth** by Project of the Month December 2021: A photograph of a custom Eurorack modular synthesizer with various modules and cables.

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Jungwook Choi

Green Guard Detection and Surveillance
R Hsu, MetAI

Self-Driving-ish Computer Vision System
iwatake

Cat Laser Turret Robot

<https://developer.nvidia.com/embedded/community/jetson-projects/babywatcher>

weed killing robot
D Niewinski

JetMax
Hiwonder

LabSentinel

BabyWatcher
S Nakano

Neurorack: A Deep AI-

Project of the Month December 2021

Intro to AI platform - L00 Syllabus BabyWatcher | NVIDIA Developer

developer.nvidia.com/embedded/community/jetson-projects/babywatcher

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BabyWatcher

For newborn babies, turning over and lying on their stomachs can be risk suffocation, so it is key to make sure they can sleep or stay in prone position. For their well-being, BabyWatcher monitors your newborn's position and detects if they are in prone or supine position. To create the transfer learning model, based on SSD-Mobilenet, training material was annotated with CVAT, exported into Pascal VOC format, merged into a single dataset, and automatically split into training/validation. The final transfer learning model is then converted into ONNX format.

Works with...

Jetson Nano

Authors

S Nakano

Resources

> View project repository

<https://developer.nvidia.com/embedded/community/jetson-projects/babywatcher>



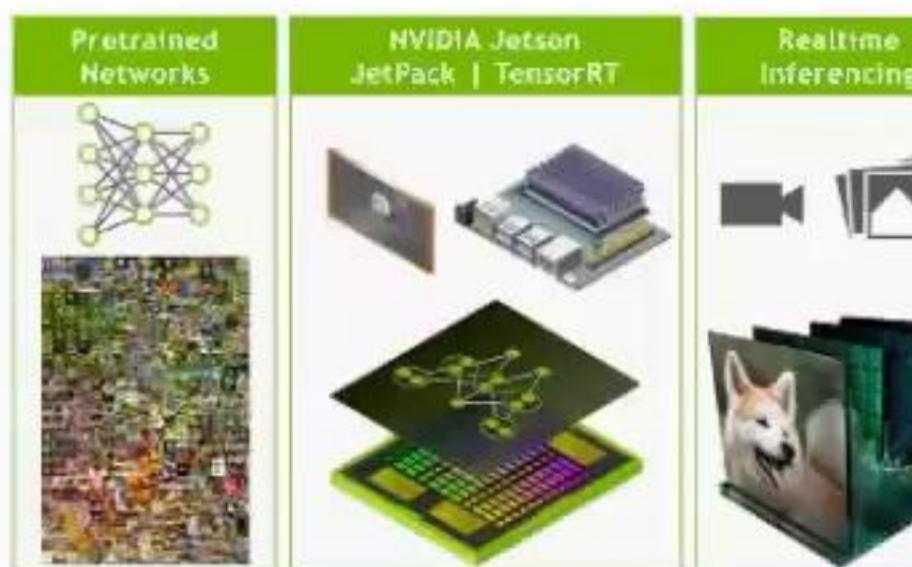
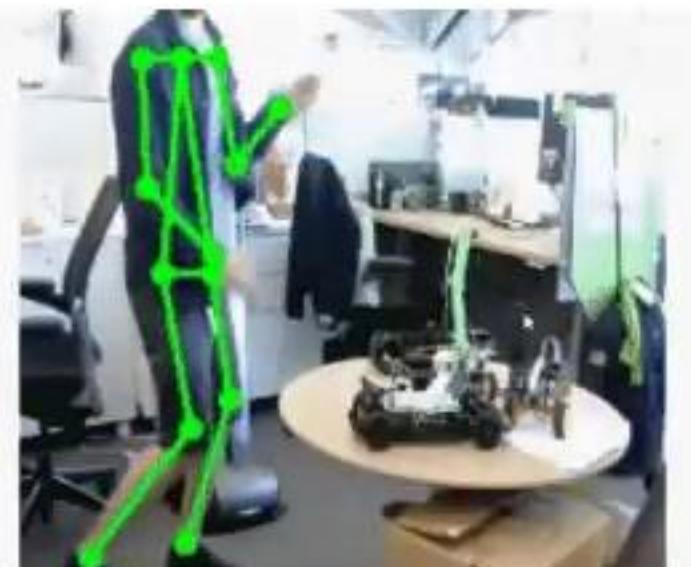
Jungwook Choi

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Jetson Community Projects

Explore and learn from Jetson projects created by us and our community. These have been created with Jetson developer kits. Scroll down to see projects with code, videos and more.

Get Started with these Projects

[Jetbot](#)[Hello AI World](#)[JetRacer](#)[Real-time Human Pose Estimation](#)[Filters](#)

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Every month, we'll award one JETSON AGX ORIN Developer Kit to a project that's cut above the rest for its application, inventiveness, and creativity.

Welcome to the Jetson Projects forum!

Visit Forum

vip-member Using Jetbot with Jetson Orin Nano dev kit

Stable Diffusion on Jetson AGX Orin and Xavier

opencv Electronically Assisted Astronomy with a Jetson Nano

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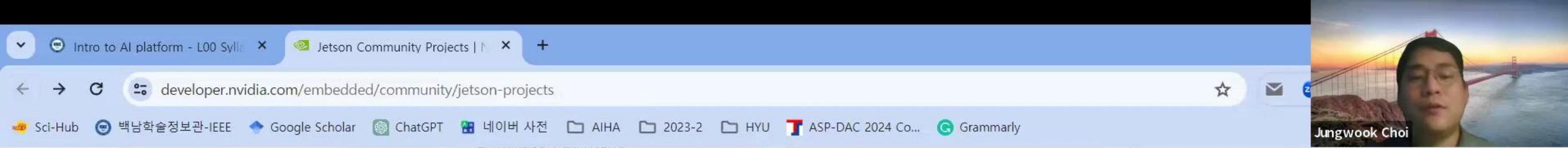
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<https://developer.nvidia.com/embedded/community/jetson-projects/jetracer>



ALL Jetson Nano Classifier



Project of the Month October 2021

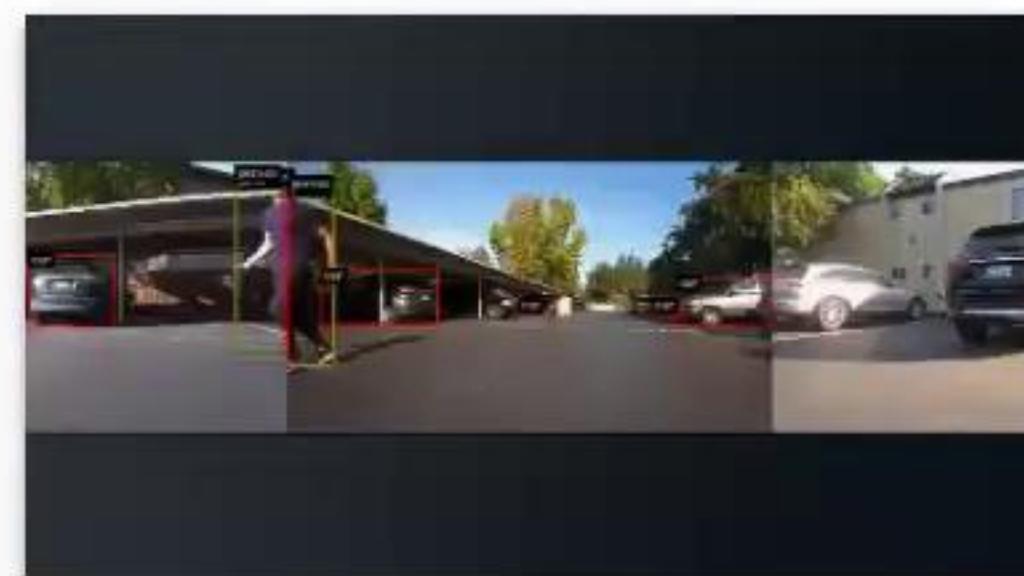
Acute Lymphoblastic Leukemia Classification with Jetson Nano

A Milton-Barker



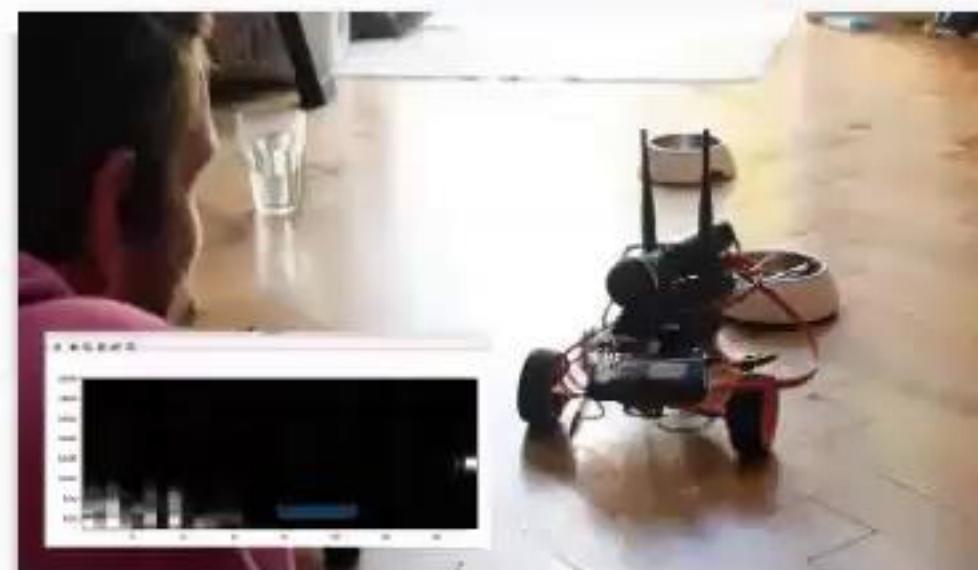
Robot Nano Hand

Silicon Highway



Jetson Multicamera Pipelines

T Lewicki



Sheepdog Whistle Neural Network



Beer Sherpa

D Niewinski



Dart Score Detector

K Kawasaki

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developer.nvidia.com/embedded/community/jetson-projects

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Project of the Month November 2021

LiveChess2FEN: A Chess Piece Classifying Framework

D Mallasén Quintana

AI for Healthcare with Jetson Nano 2GB

A Bhandare

SensorBox

Dr. H Lange, AIWerkstatt

Project of the Month October 2021

ALL Jetson Nano Classifier

Acute Lymphoblastic Leukemia Classification with Jetson Nano

A Milton-Barker

Robot Nano Hand

Silicon Highway

Jetson Multicamera Pipelines

T Lewicki

https://developer.nvidia.com/embedded/community/jetson-projects/robot_nano_hand

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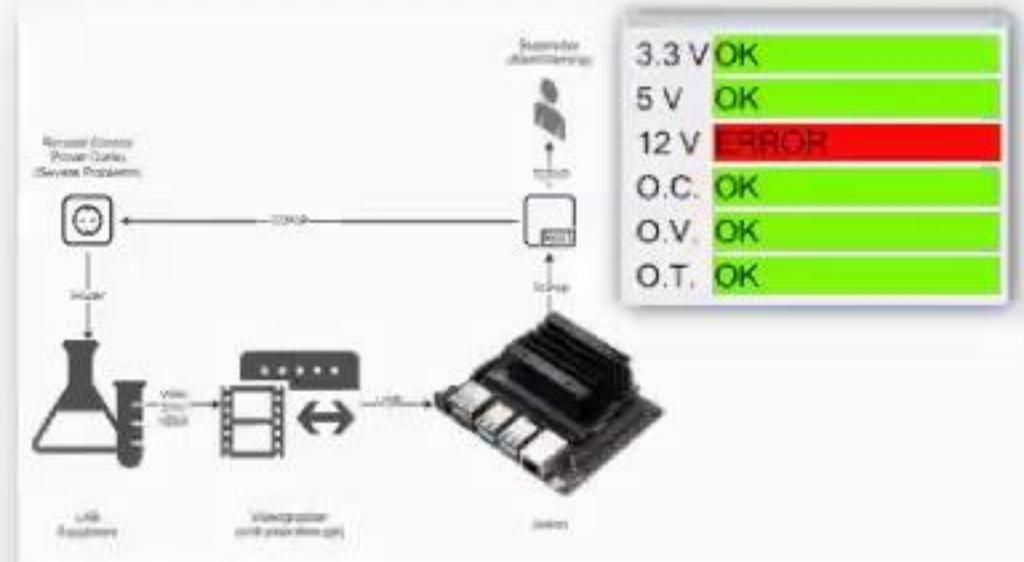
developer.nvidia.com/embedded/community/jetson-projects

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Jungwook Choi



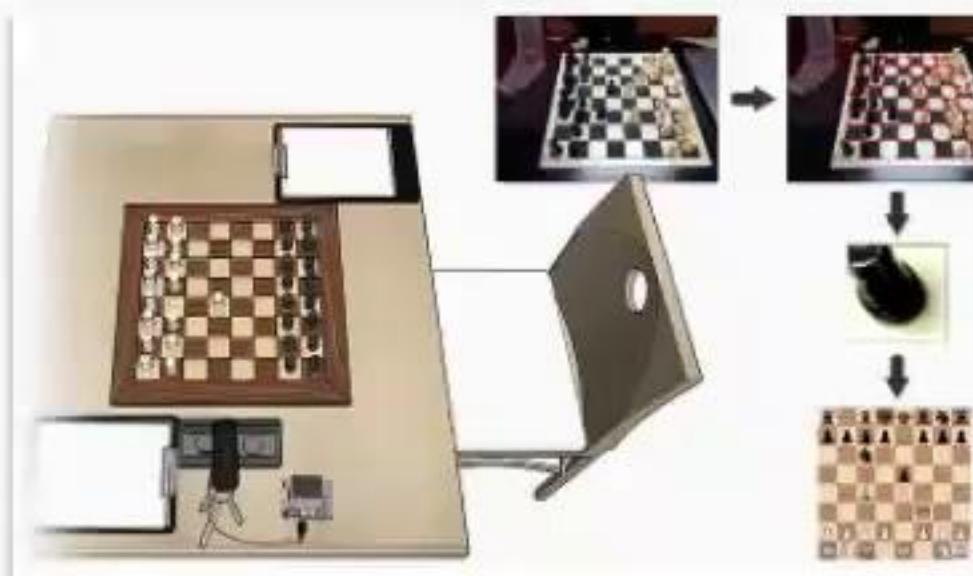
Cat Laser Turret Robot
D Niewinski



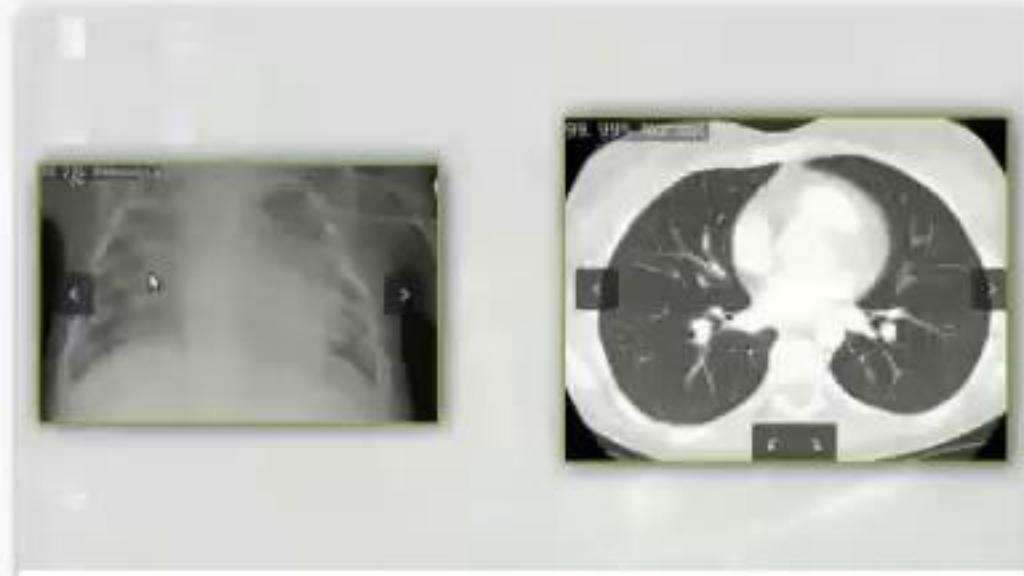
LabSentinel
N Maas



Project of the Month December 2021
Neurorack: A Deep AI-based Eurorack Synth
N Devis



Project of the Month November 2021
LiveChess2FEN: A Chess Piece Classifying Framework
D Mallón Quintana



AI for Healthcare with Jetson Nano 2GB
A Bhandare



SensorBox
Dr. H Lange, AIWerkstatt

<https://developer.nvidia.com/embedded/community/jetson-projects/labsentinel>

Final Project Examples



Jungwook Choi

- Jetson Community Projects

<https://developer.nvidia.com/embedded/community/jetson-projects> (Ex 1, Ex 2)

The screenshot shows a Chrome browser window displaying the NVIDIA Developer website at <https://developer.nvidia.com/embedded/community/jetson-projects>. The page is titled "Community Gallery" and features several project examples:

- DESCRIPTIVE AI** (D-KENDRI): A street scene with green text overlays.
- MONITORING WITH JETSON NANO** (R LO): A monitoring interface showing a person's skeleton and a camera feed.
- POSE ESTIMATION ON JETSON WITH OPENPIPPAF** (GALLIDT): A street scene with people's skeletons overlaid.
- INTERACTIVE MUSIC**: A person playing a guitar with a green interface overlay.
- FACE RECOGNITION**: People walking in a hallway with a red circular overlay.
- PERSON COUNTING**: A diagram showing a flow from a camera input to a person count output.

At the bottom, there is a cookie consent banner: "NVIDIA websites use cookies to deliver and improve the website experience. See our [cookie policy](#) for further details on how we use cookies and how to change your cookie settings." with "ACCEPT" and "REFUSE" buttons.

Final Project Examples



- Social distancing monitoring system (위대은, 최정훈, 김형민, 2021)



Final Project Examples



- Social distancing monitoring system (위대은, 최정훈, 김형민, 2021)



Final Project Examples



- Social distancing monitoring system (위대은, 최정훈, 김형민, 2021)



Final Project Examples



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Final Project Examples



- Social distancing monitoring system (위대은, 최정훈, 김형민, 2021)



Final Project Examples



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Final Project Examples



- Social distancing monitoring system (위대은, 최정훈, 김형민, 2021)



Final Project Examples



- Social distancing monitoring system (위대은, 최정훈, 김형민, 2021)



Course Schedule



- 16-week course (IC-PBL, schedule can be changed...)
 - (Tentative) Invited Lecture* from an industry expert

W1	3/5 3/8	Syllabus Intro to Deep Learning		W9	4/30 5/3	Deep Learning Platform	Lab 8 (Linux)
W2	3/12 3/15	DL: Basic Concepts 1	Lab 1 (Neural Network)	W10	5/7 5/10	Implementing CNN	Lab 9 (Jetson)
W3	3/19 3/22	DL: Basic Concepts 2	Lab 2 (DL Apps)	W11	5/14 5/17	Accelerating CNN	Lab 10 (TensorRT)
W4	3/26 3/29	Deep Learning Framework	Lab 3 (Pytorch)	W12	5/21 5/24	Final project proposal	(Final project announcement)
W5	4/2 4/5	CNN: Basic Concepts	Lab 4 (CNN)	W13	5/28 5/31	(Final project)	<Office hour>
W6	4/9 4/12	CNN: History	Lab 5 (Image Classification)	W14	6/4 6/7	(Final project)	<Office hour>
W7	4/16 4/19	App1: Object detection	Lab 6 (Object Detection)	W15	6/11 6/14	Final project presentation	(Final project report)
W8	4/23 4/26	App2: Pose Estimation	Lab 7 (Pose Estimation)	W16	6/18 6/21	(Tentative) Invited Talk	

Evaluation (Total 100 Points)



- Attendance (10 points)
 - Random attendance check: -1 point for each unattended lecture ($> 10 \rightarrow$ Grade F)
 - **Failure to return the board in good condition → Grade D**
- Labs (40 points)
 - 10 Labs – Submit a short report before the next class (format will be provided)
- Final Project (50 points)
 - Project details will be announced at around Week 12
- Extra points for active participation (up to 5 points)
 - +1 to total points if you provide a good answer for another student's question
- Absolute Grading



Intro to AI Platform

Syllabus

Jungwook Choi
[\(choij@hanyang.ac.kr\)](mailto:choij@hanyang.ac.kr)
Hanyang University
2024 Spring

Lab 0: Team Building



Jungwook Choi

- Make a group of 2 students
- Select a team leader
- Each team leader send TAs an email with the team information including:
 - Team member name
 - Team member email (**should be XXX@hanyang.ac.kr**)
 - Cell-phone number (for emergency contact)
- Don't worry if you don't have a colleague to work with
 - Just send an email TAs with your info, then we will find one for you

Evaluation (Total 100 Points)



Jungwook Choi

- Attendance (10 points)
 - Random attendance check: -1 point for each unattended lecture ($> 10 \rightarrow$ Grade F)
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Lab 0: Team Building



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◦
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Jungwook Choi

Intro to AI Platform

Syllabus



Jungwook Choi
[\(choij@hanyang.ac.kr\)](mailto:choij@hanyang.ac.kr)
Hanyang University
2024 Spring

P 자동 저장 (●) 끔 ⌂ ⌃ ⌄ 모 iap_2024_Lec00_syll... • 이 PC에 저장됨 ▾ 검색

Jun Teams Jungwook Choi

파일 홈 삽입 그리기 디자인 전환 애니메이션 슬라이드 쇼 녹음/녹화 검토 보기 도움말

레이아웃 ▾ 12 가^ 가^ 가^

새 슬라이드 슬라이드 쇼 ▾

클립보드

선택 편집 음성 추가 기능

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Final Project Goal

- [Skill] Use Jetson Nano to run “real” Deep Learning models
- [Knowledge] Apply knowledge you learn about deep learning (especially CNNs) to make your own application
- [Novelty] Invent an interesting AI application that can solve a real-world problem

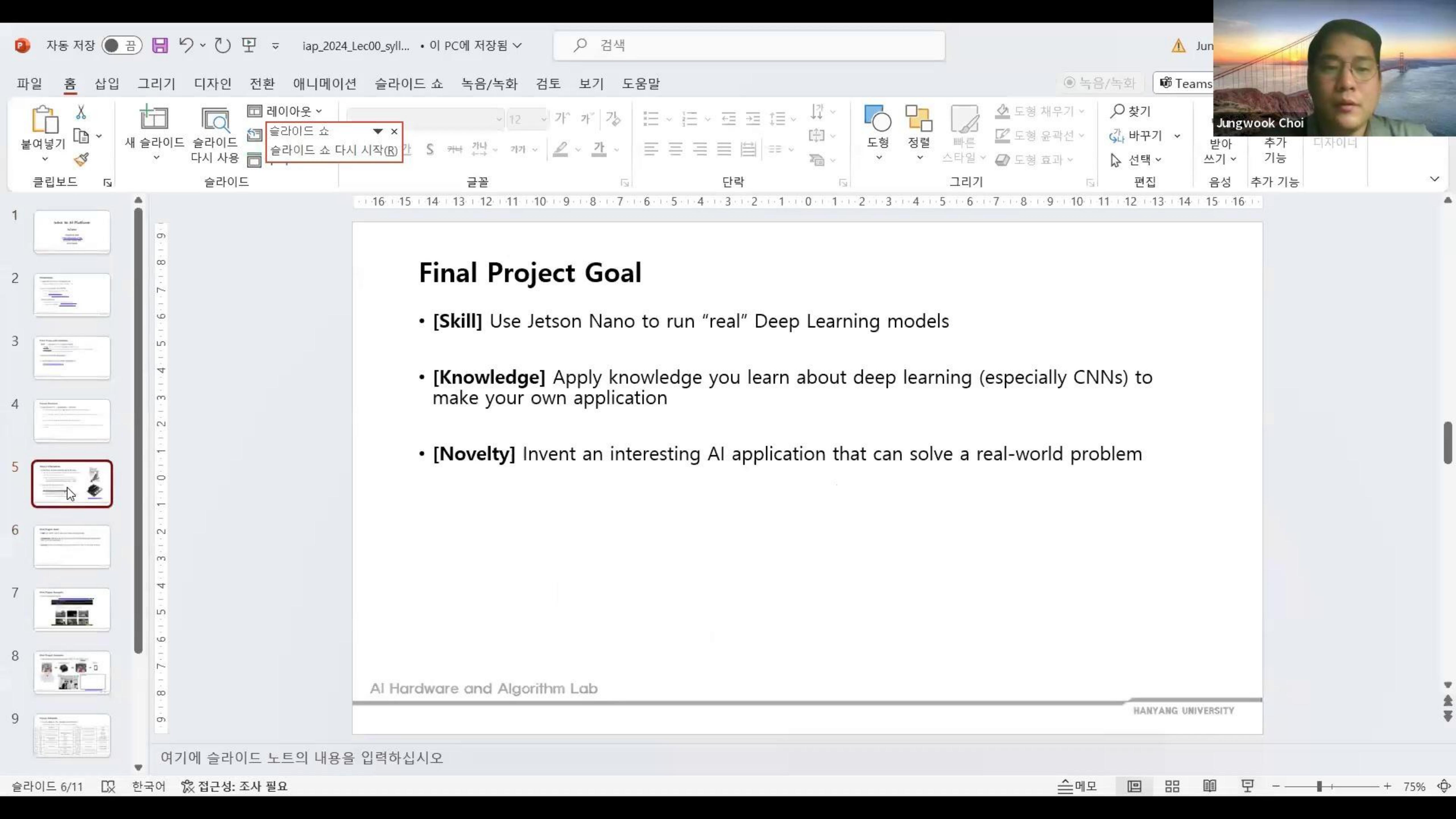
AI Hardware and Algorithm Lab

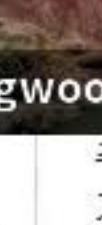
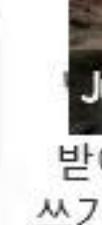
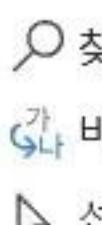
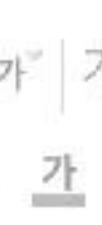
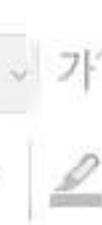
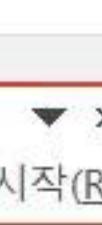
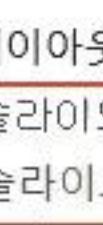
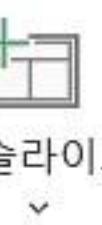
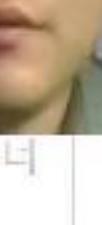
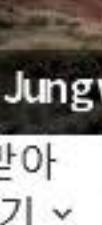
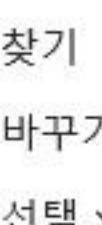
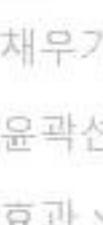
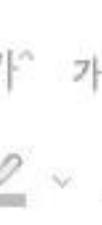
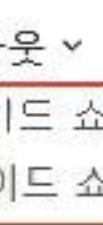
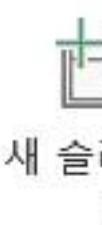
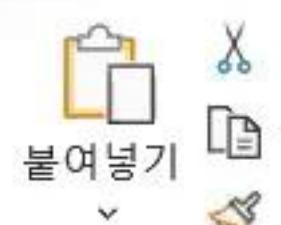
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슬라이드 6/11 한국어 접근성: 조사 필요

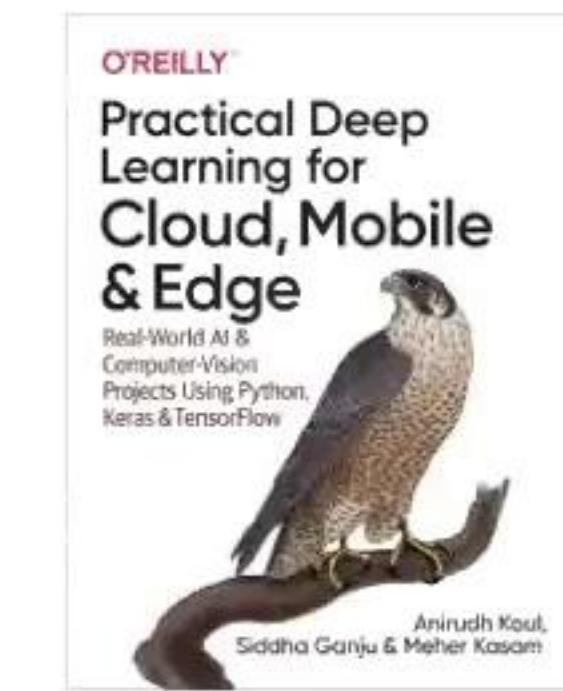
슬메모





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 - **Email TA for your team preference**
 - Or we will make teams for you 😊
 - NVIDIA Jetson Nano board will be provided per team
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[NVIDIA Jetson Nano board](#)

AI Hardware and Algorithm Lab

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Jungwook Choi

P 자동 저장 끔 ⌂ ⌂ 모 iap_2024_Lec00_syll... • 이 PC에 저장됨 ▾ 검색

Jun Jungwook Choi

Teams

파일 홈 삽입 그리기 디자인 전환 애니메이션 슬라이드 쇼 녹음/녹화 검토 보기 도움말

레이아웃 새 슬라이드 슬라이드 다시 사용 슬라이드 쇼 다시 시작(R) 단락 글꼴 그리기 편집

클립보드

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Final Project Examples

- Jetson Community Projects

<https://developer.nvidia.com/embedded/community/jetson-projects> (Ex 1, Ex 2)

Community Gallery

Have a Jetson project to share? Post it on our [Forum](#) for a chance to be featured here too. Every month, we'll award one Jetson AGX Xavier Developer Kit to a project that's a cut above the rest for its application, inventiveness and creativity.

Furthermore, you can earn an AI Certification by submitting the Jetson project that you created. Learn more about [Jetson AI Certification Programs](#).

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스메모

P 자동 저장 ● 끔 ⌂ ⌂ ⌂ iap_2024_Lec00_syll... • 이 PC에 저장됨 ▾ 검색

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● 녹음/녹화 Teams

레이아웃 ▾ 12 가^ 가^ 가^

새 슬라이드 슬라이드 다시 사용 슬라이드 쇼 다시 시작(R)

클립보드 슬라이드

글꼴 단락 그림 편집

도형 정렬 빠른 스타일 도형 효과

찾기 바꾸기 선택 음성 추가 기능

Jungwook Choi 쓰기

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NVIDIA DEVELOPER HOME FORUMS DOCS DOWNLOADS TRAINING ACCOUNT

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DESCRIPTIVE AI MONITORING WITH JETSON NANO POSE ESTIMATION ON JETSON WITH OPENPIEAF

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Jungwook Choi

Intro to AI Platform

Syllabus

Jungwook Choi
[\(choij@hanyang.ac.kr\)](mailto:choij@hanyang.ac.kr)
Hanyang University
2024 Spring

자동 저장 끔 H ↻ 🔍 lap_2024... 🔍 Jungwook Choi JC

파일 홈 삽입 그리기 디자인 전환 애니메이션 슬라이드 녹음/녹화 검토 보기 도움말

붙여넣기 슬라이드 글꼴 단락 그리기 편집 받아쓰기 추가 기능

클립보드

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Syllabus

Jungwook Choi
(choij@hanyang.ac.kr)
Hanyang University
2024 Spring

AI Hardware and Algorithm Lab

HANYANG UNIVERSITY

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슬라이드 1/11 한국어 접근성: 조사 필요 메모



자동 저장 (금) ⌂ ⌃ ⌁ ⌂ ⌂ iap_2024_Lec00_syll... • 이 PC에 저장됨 ▾

검색

Jungwook Choi JC

- □ X

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● 녹음/녹화 Teams에서 프레젠테이션 공유



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Jungwook Choi
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2024 Spring

AI Hardware and Algorithm Lab

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Class Hours and Locations



Jungwook Choi

- Theory + Lab class (IC-PBL: onsite, recorded)
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Introduction



Jungwook Choi

- Course title: Intro to AI Platform and Lab
 - Course number / Course code: ELE4103 / 10411
- Instructor: Jungwook Choi (최정욱)
 - Office: Engineering center annex 702-1
 - E-mail: choij@hanyang.ac.kr
 - Homepage: <https://jchoi-hyu.github.io>
- Teaching assistants
 - Chanhee Chung (정찬희): nia4905@hanyang.ac.kr
 - Sungwan Ryu (류승완): ssk05118@hanyang.ac.kr

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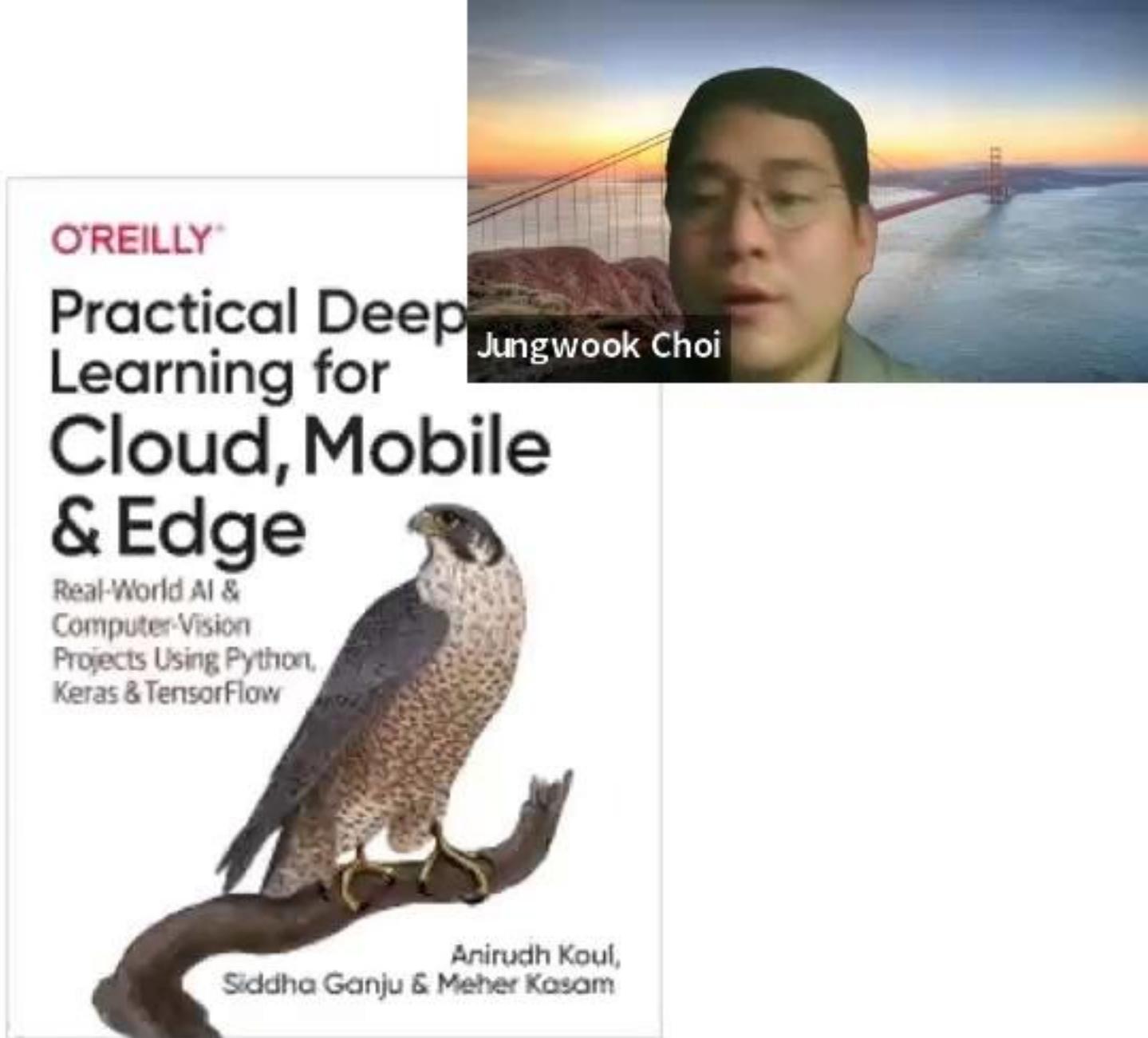


Jungwook Choi

- AI algorithms (CNN) + Applications + Platforms
 - Understand key concepts of deep learning theories and AI applications
 - Understand the overall architecture of deep learning hardware platforms and learn how to use it
 - Learn skills to accelerate the execution of AI applications
 - Implement a creative AI system based on the techniques learned about applications and the platforms

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