

Edge Processing Unit

The Way to Efficient Edge Computing for Industry 4.0

Industrie
:: 2025

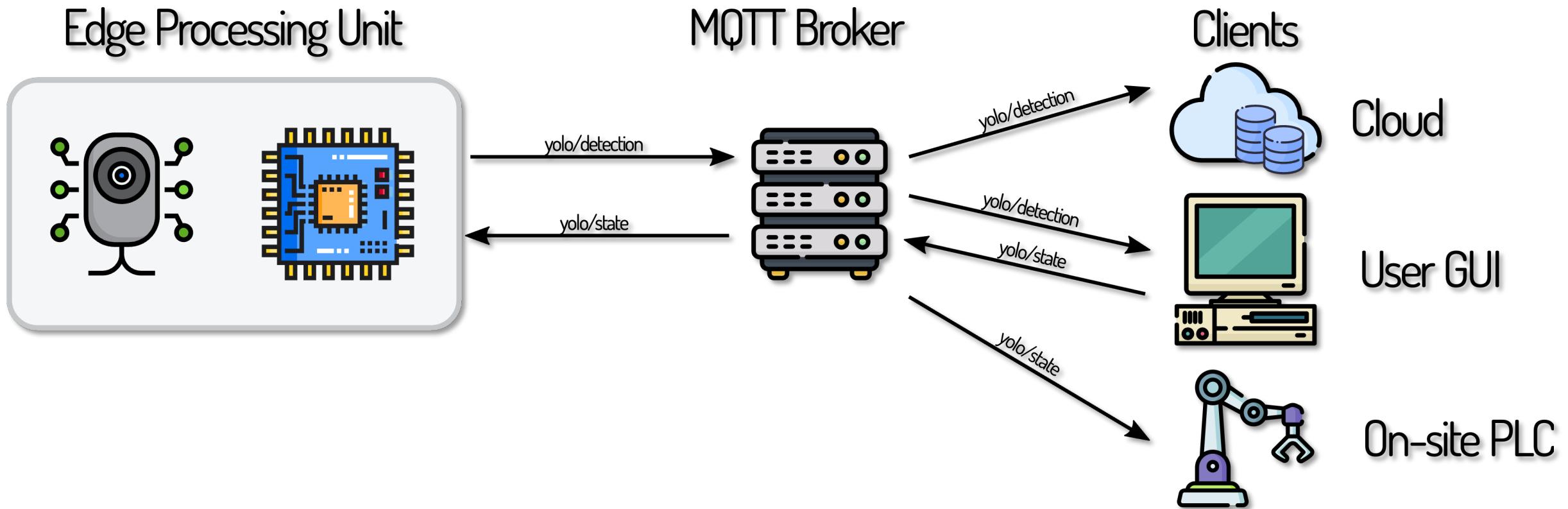
Partners



Objective



Setup

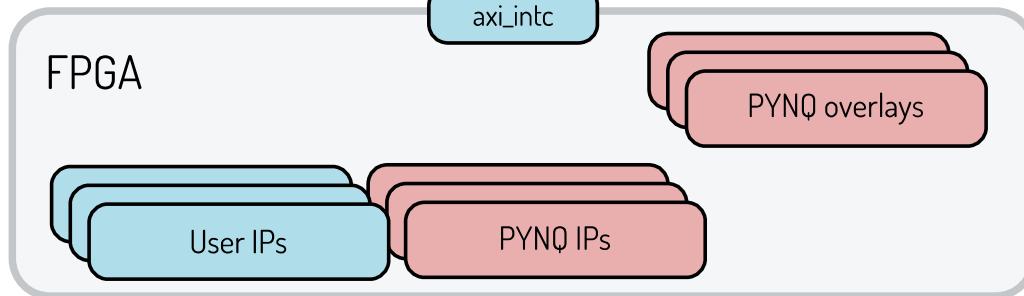
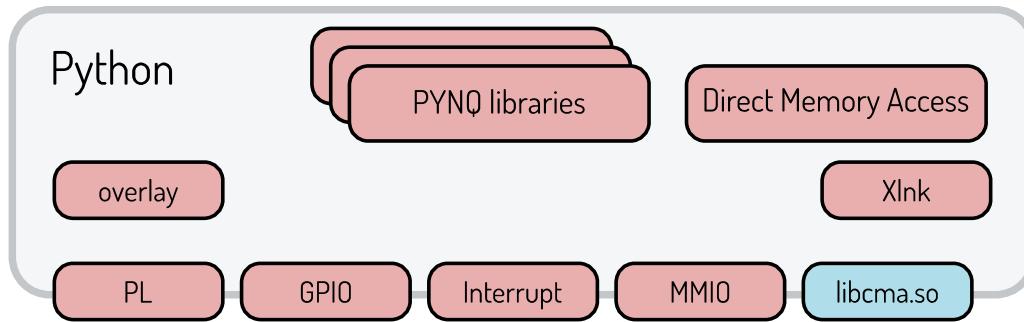
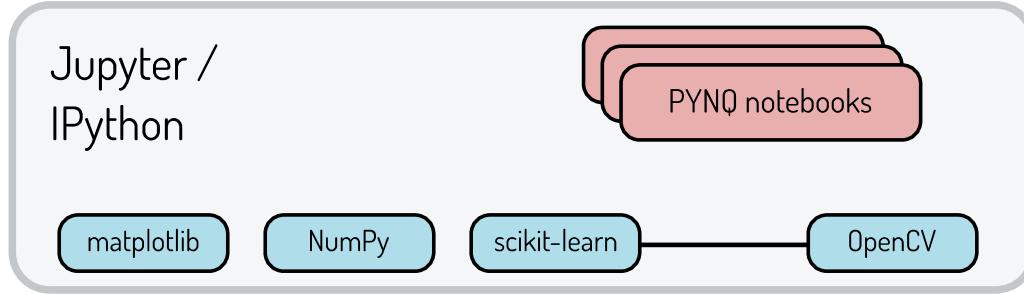


Icons made by Freepik from Flaticon

Hardware / Software



Application
Software
Hardware



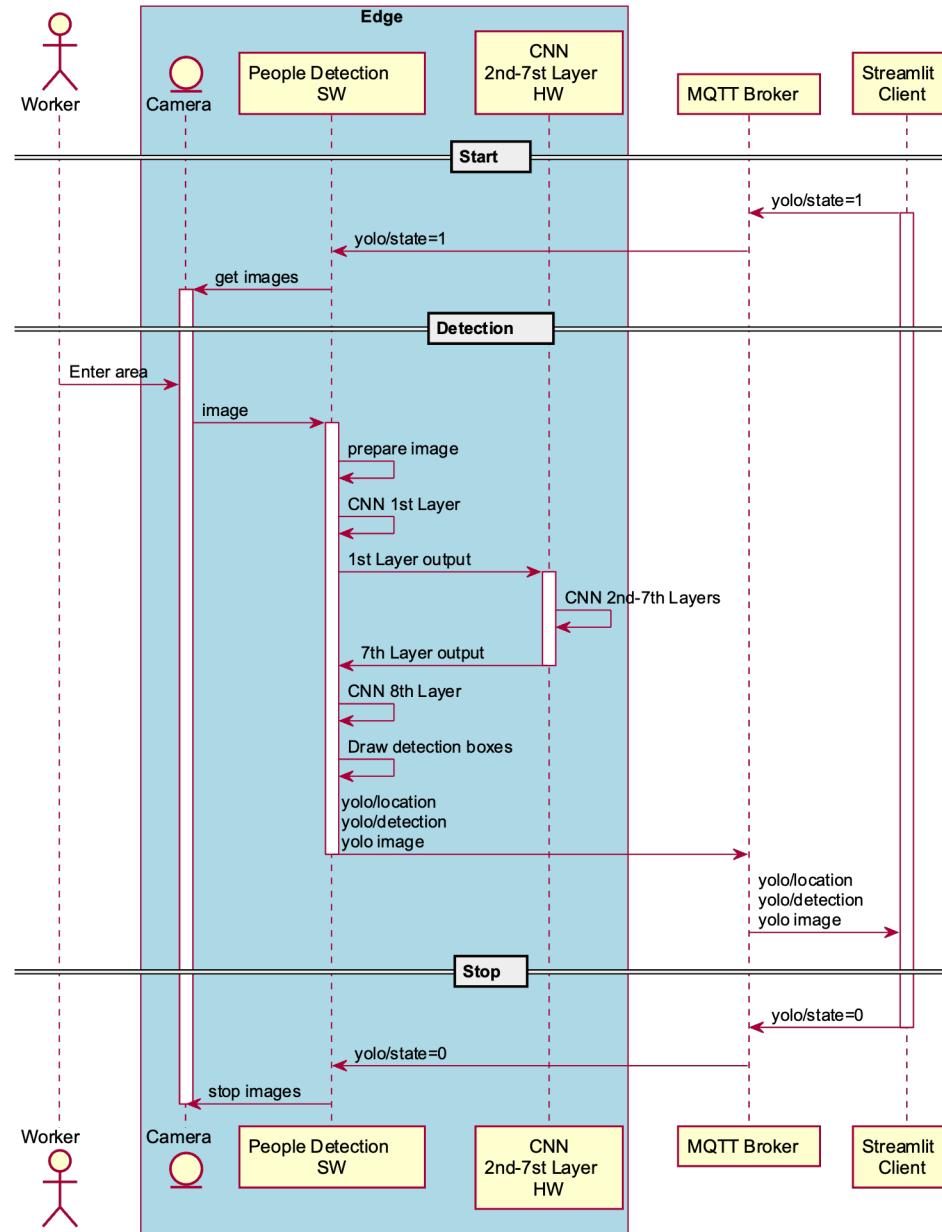
Apps

APIs

Drivers

Hardware Accelerator

Workflow



Controls

Start
Stop
Reload

Detection is running

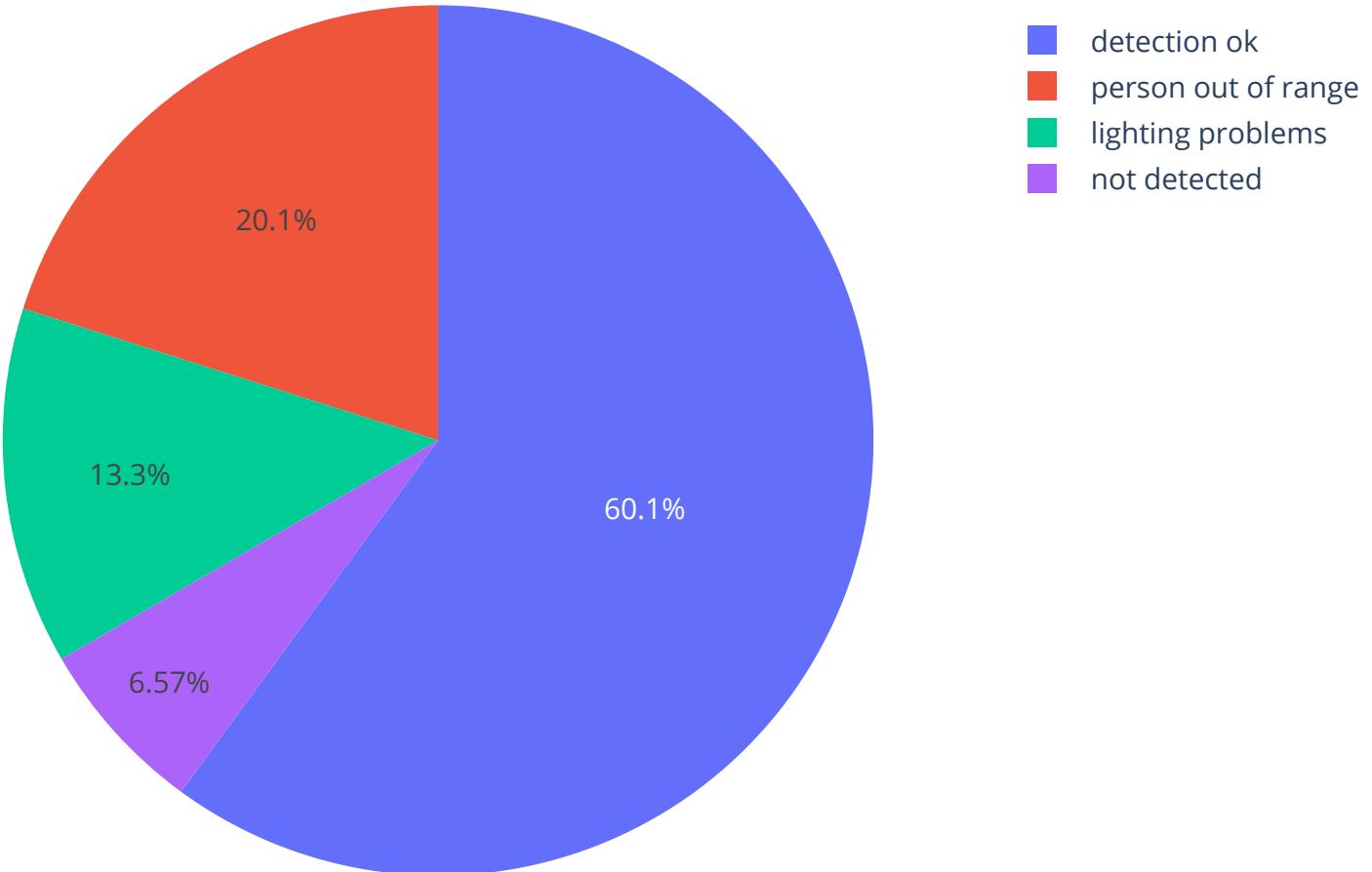
Image



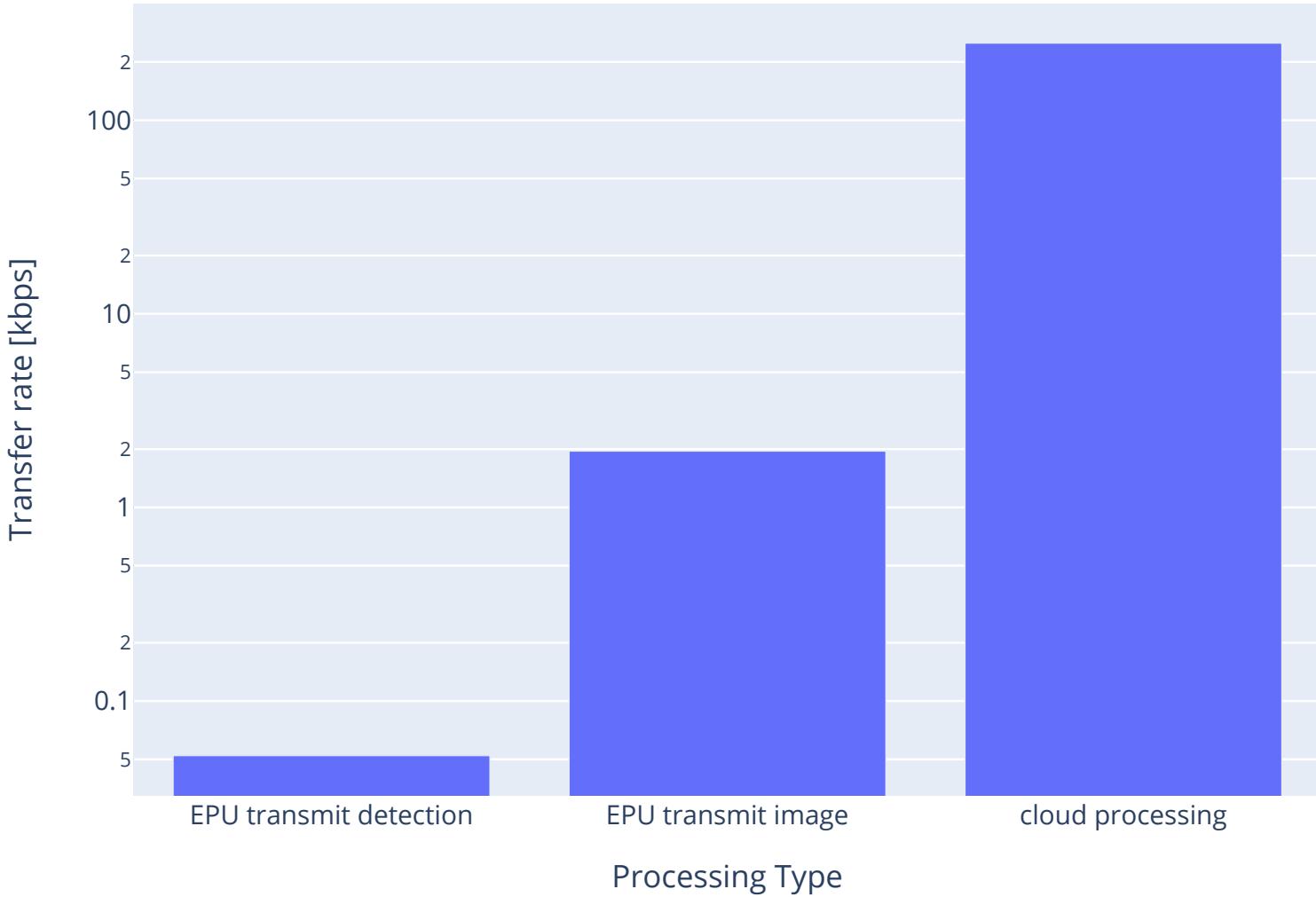
Detection

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Results – Overall Detection Rate



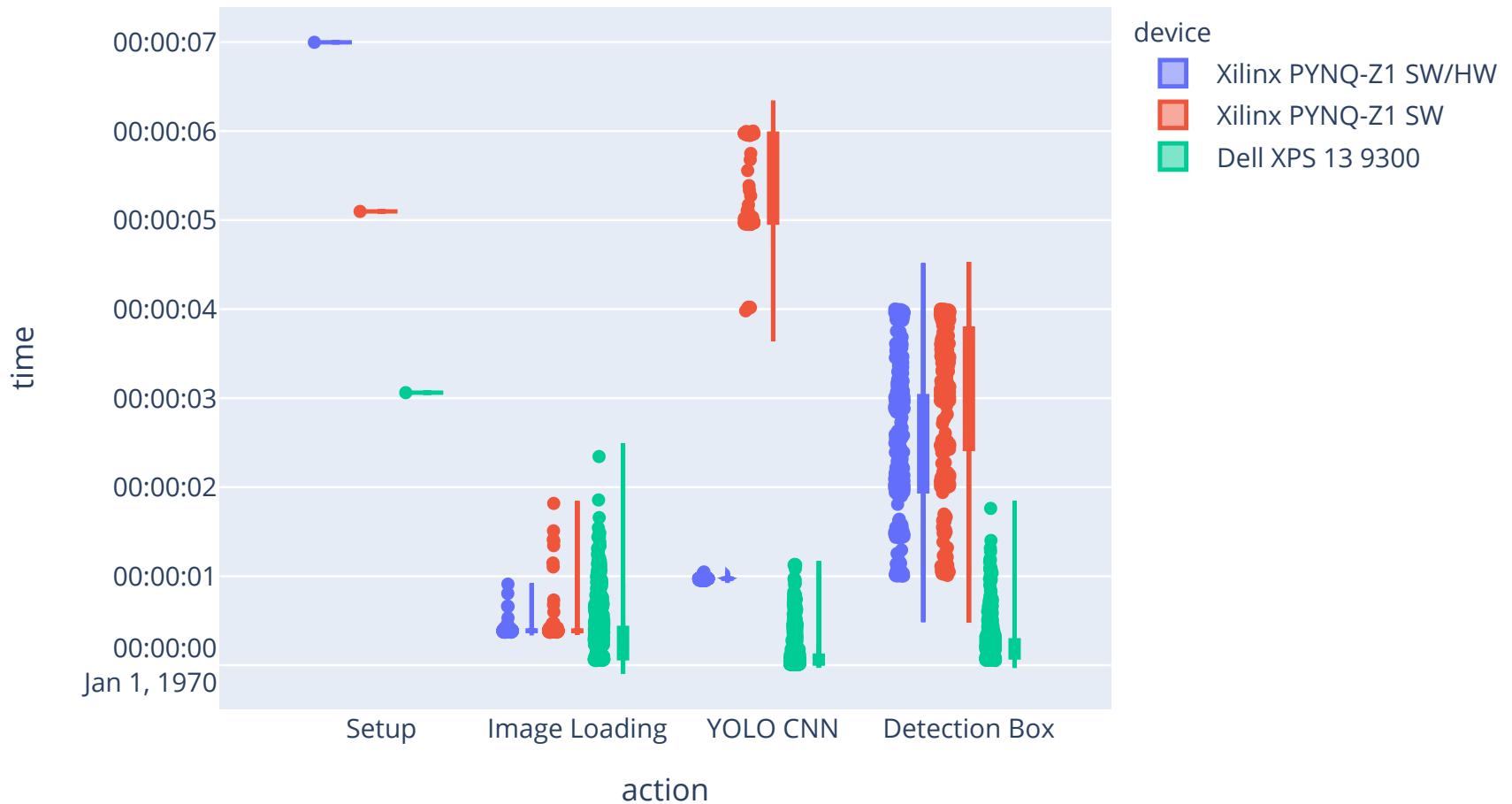
Results – Comparison Data Transferrate



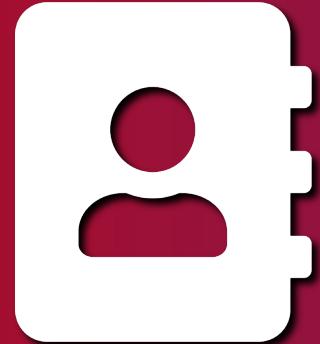
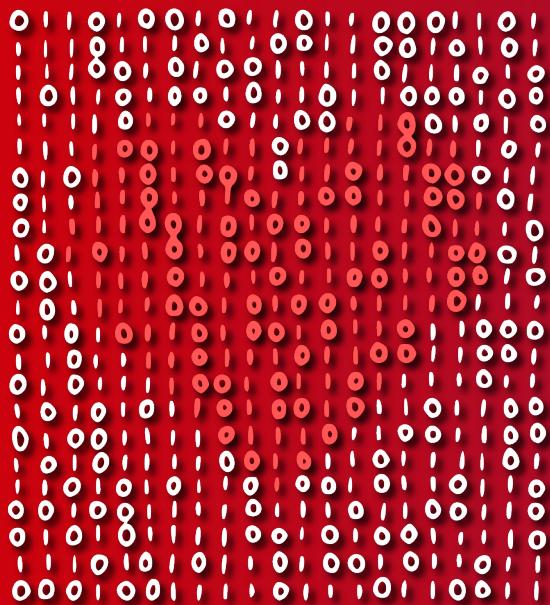
Results – Comparison Energy Consumption



Results – Speed Comparison



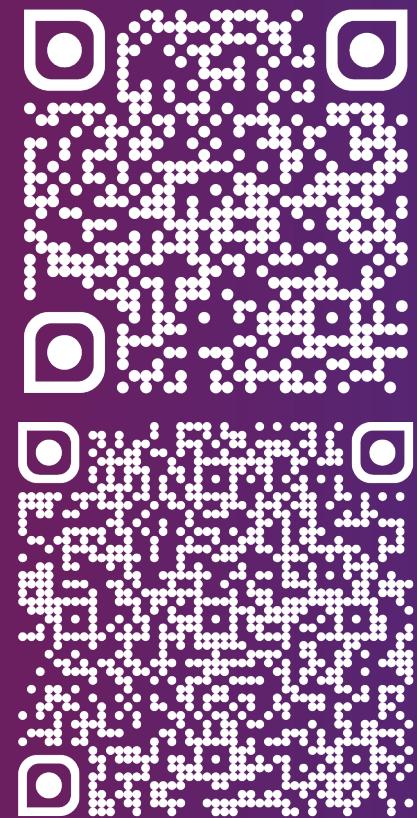
Thank you for your attention



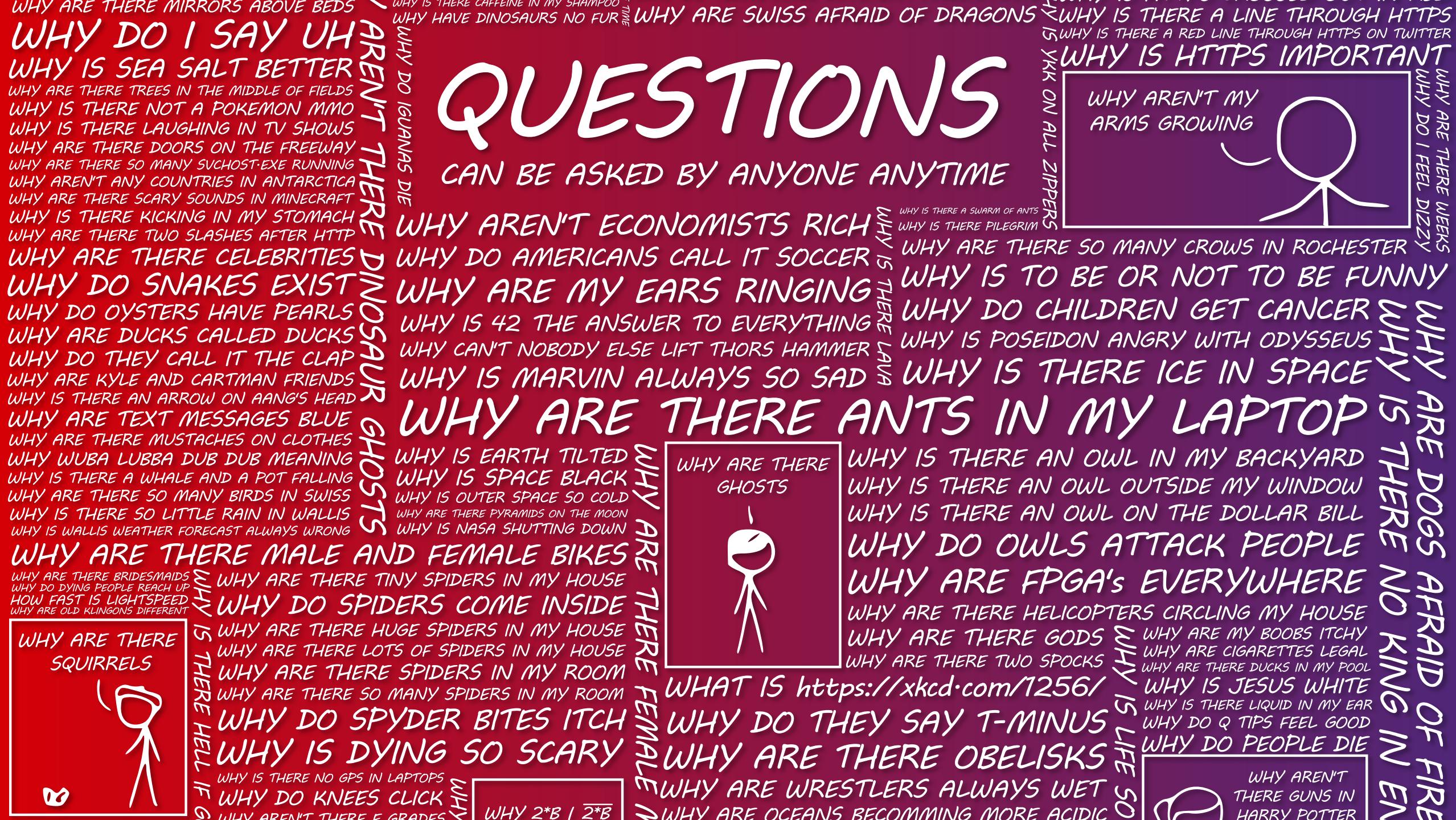
Get the source

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Hes-SO // VALAIS
WALLIS
School of Engineering



FFHS
Fernfachhochschule
Schweiz
Mitglied der SUPSI



WHY ARE THERE MIRRORS ABOVE BEDS
WHY DO I SAY UH
WHY IS SEA SALT BETTER
WHY ARE THERE TREES IN THE MIDDLE OF FIELDS
WHY IS THERE NOT A POKEMON MMO
WHY IS THERE LAUGHING IN TV SHOWS
WHY ARE THERE DOORS ON THE FREEWAY
WHY ARE THERE SO MANY SUCHHOST-EXE RUNNING
WHY AREN'T ANY COUNTRIES IN ANTARCTICA
WHY ARE THERE SCARY SOUNDS IN MINECRAFT
WHY IS THERE KICKING IN MY STOMACH
WHY ARE THERE TWO SLASHES AFTER HTTP
WHY ARE THERE CELEBRITIES
WHY DO SNAKES EXIST
WHY DO OYSTERS HAVE PEARLS
WHY ARE DUCKS CALLED DUCKS
WHY DO THEY CALL IT THE CLAP
WHY ARE KYLE AND CARTMAN FRIENDS
WHY IS THERE AN ARROW ON AANG'S HEAD
WHY ARE TEXT MESSAGES BLUE
WHY ARE THERE MUSTACHES ON CLOTHES
WHY WUBA LUBBA DUB DUB MEANING
WHY IS THERE A WHALE AND A POT FALLING
WHY ARE THERE SO MANY BIRDS IN SWISS
WHY IS THERE SO LITTLE RAIN IN WALLIS
WHY IS WALLIS WEATHER FORECAST ALWAYS WRONG

WHY DO I FEEL DIZZY
WHY AREN'T THERE GHOSTS
WHY DO IGUANAS DIE

WHY IS THERE CAFFEINE IN MY SHAMPOO
WHY HAVE DINOSAURS NO FUR

WHY ARE SWISS AFRAID OF DRAGONS

WHY IS THERE A LINE THROUGH HTTPS
WHY IS THERE A RED LINE THROUGH HTTPS ON TWITTER
WHY IS HTTPS IMPORTANT
WHY ARE THERE WEEKS
WHY ARE THERE DAYS
WHY ARE THERE HOURS
WHY ARE THERE MINUTES
WHY ARE THERE SECONDS
WHY ARE THERE MILISECOND
WHY ARE THERE MICROSECOND
WHY ARE THERE NANOSECOND
WHY ARE THERE PETASECOND
WHY ARE THERE FEMTOSECOND
WHY ARE THERE ATTOSSECOND
WHY ARE THERE ZETTASECOND
WHY ARE THERE YOTTASECOND
WHY ARE THERE EONTASECOND
WHY ARE THERE ZEPTASECOND
WHY ARE THERE YOTTASECOND

QUESTIONS

CAN BE ASKED BY ANYONE ANYTIME

WHY AREN'T ECONOMISTS RICH
WHY DO AMERICANS CALL IT SOCCER
WHY ARE MY EARS RINGING
WHY IS 42 THE ANSWER TO EVERYTHING
WHY CAN'T NOBODY ELSE LIFT THORS HAMMER
WHY IS MARVIN ALWAYS SO SAD
WHY ARE THERE ANTS IN MY LAPTOP
WHY IS EARTH TILTED
WHY IS SPACE BLACK
WHY IS OUTER SPACE SO COLD
WHY ARE THERE PYRAMIDS ON THE MOON
WHY IS NASA SHUTTING DOWN
WHY ARE THERE GHOSTS
WHY ARE THERE SPIDERS
WHY ARE THERE TINY SPIDERS IN MY HOUSE
WHY DO SPIDERS COME INSIDE
WHY ARE THERE HUGE SPIDERS IN MY HOUSE
WHY ARE THERE LOTS OF SPIDERS IN MY HOUSE
WHY ARE THERE SPIDERS IN MY ROOM
WHY ARE THERE SO MANY SPIDERS IN MY ROOM
WHY DO SPYDER BITES ITCH
WHY IS DYING SO SCARY
WHY IS THERE NO GPS IN LAPTOPS
WHY DO KNEES CLICK
WHY AREN'T THERE E GRADES
WHAT IS <https://xkcd.com/1256/>
WHY DO THEY SAY T-MINUS
WHY ARE THERE OBELISKS
WHY ARE WRESTLERS ALWAYS WET
WHY ARE OCEANS BECOMMING MORE ACIDIC

WHY ARE THERE BRIDESMAIDS
WHY DO DYING PEOPLE REACH UP
HOW FAST IS LIGHTSPEED
WHY ARE OLD KLINGONS DIFFERENT

WHY

WHY ARE THERE SQUIRRELS



WHY ARE THERE FEMALE



WHY IS THERE AN OWL IN MY BACKYARD
WHY IS THERE AN OWL OUTSIDE MY WINDOW
WHY IS THERE AN OWL ON THE DOLLAR BILL
WHY DO OWLS ATTACK PEOPLE
WHY ARE FPGA's EVERYWHERE
WHY ARE THERE HELICOPTERS CIRCLING MY HOUSE
WHY ARE THERE GODS
WHY ARE THERE TWO SPOCKS

WHY ARE MY BOOBITS ITCHY
WHY ARE CIGARETTES LEGAL
WHY ARE THERE DUCKS IN MY POOL
WHY IS JESUS WHITE
WHY IS THERE LIQUID IN MY EAR
WHY DO Q TIPS FEEL GOOD
WHY DO PEOPLE DIE

WHY ARE THERE NO KING IN ENGLAND
WHY AREN'T THERE GUNS IN HARRY POTTER

WHY AREN'T MY ARMS GROWING



References

- [1] Xilinx. (2020, June). PYNO - Python productivity for Zynq. <http://www.pynq.io/>
- [2] This presentation has been designed using resources from Flaticon.com and Fontawesome.com