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Daniel's Notes

Reading list

Projects

- Projects
- Crudus MD Notes
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3D Printing

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Electronics

- Electronics

Useful stuff

- Markdown Cheatsheet
- Useful commands

Vehicles

- Vehicles
- BMW - BS82067
- MV Agusta - FC7664

Reading List

- Elixir phoenix absinthe graphql react apollo https://schneider.dev/blog/elixir-phoenix-absinthe-graphql-react-apollo-absurdly-deep-dive/
- Uber design: http://simonpan.com/work/uber/
- Modern GPS Tracking Platform: https://www.traccar.org

Topics

Collision engine

- https://gamedev.stackexchange.com/questions/26501/how-does-a-collision-engine-work

The OAuth 2.0 Authorization Framework

- https://tools.ietf.org/html/rfc6749

Event Sourcing

- https://www.martinfowler.com/eaaDev/EventSourcing.html

Micro frontends

- https://www.martinfowler.com/articles/micro-frontends.html

Micro services

- https://www.martinfowler.com/microservices/

12 factor application

- https://12factor.net/

RabbitMQ RPC

- https://www.rabbitmq.com/tutorials/tutorial-six-python.html

Check out

- https://www.envoyproxy.io/docs/envoy/latest/start/start
- https://github.com/heptio/contour
- https://www.jaegertracing.io/
- https://istio.io/

Video course

- https://www.linkedin.com/learning/jhipster-build-and-deploy-spring-boot-microservices/welcome
- https://www.linkedin.com/learning/microservices-asynchronous-messaging/getting-work-done-in-microservices
- https://vimeo.com/74589816
- https://vimeo.com/99531595
- https://www.infoq.com/presentations/migration-cloud-native/

3D Printing

- Ultimaker
- Snapmaker

CNC

Snapmaker

https://forum.snapmaker.com/t/reverse-engineering-the-module-wiring/3031

3D Printing Module:

```
PIN1: VCC, Heater Socket Pin 1, Fan+
PIN2: Stepper Coil A+
PIN3: Heater Socket Pin 2
PIN4: Stepper Coil A-
PIN5: Thermistor Socket Pin 1
PIN6: Stepper Coil B-
PIN7: GND, Fan-, Thermistor Socket Pin 2
PIN8: Stepper Coil B+
```

Heated Build Plate:

```
PIN1: Heating Element +
PIN2: UNUSED
PIN3: Heating Element -
PIN4: UNUSED
PIN5: Thermistor +
PIN6: Thermistor -
```

The heating element registered as 12Ohms so 48W at 24V. The Thermistor gave a reading of 80kOhm in my 90 degree F garage.

Linear Module:

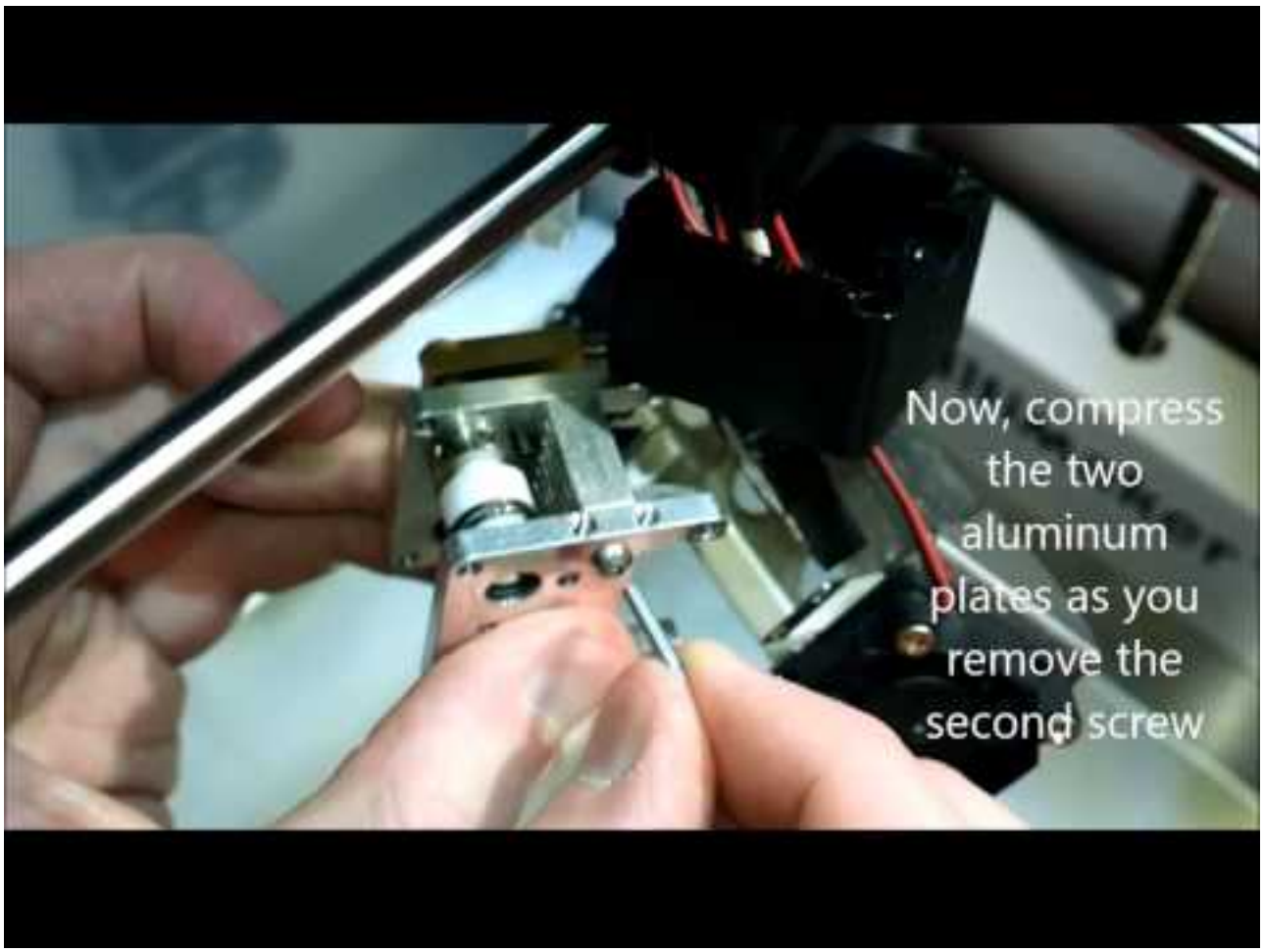
```
PIN1: Coil A +
PIN2: Coil A -
PIN3: Coil B +
PIN4: Limit Switch +
PIN5: Coil B -
PIN6: Limit Switch -
```

Ultimaker

Repairs

Nozzle

Ultimaker 2 - Removing the Nozzle https://www.youtube.com/watch?v=-1Nh0snHLYw


Now, compress
the two
aluminum
plates as you
remove the
second screw

Electronics

- I2C

Canbus

Tools

- https://github.com/eerimoq/cantools

Canbus addresses

- https://community.carloop.io/t/list-of-can-id-descriptions-from-opengarages-org/104
- http://www.loopybunny.co.uk/CarPC/can/267.html

i2c

Articles

- I2C in a nutshell

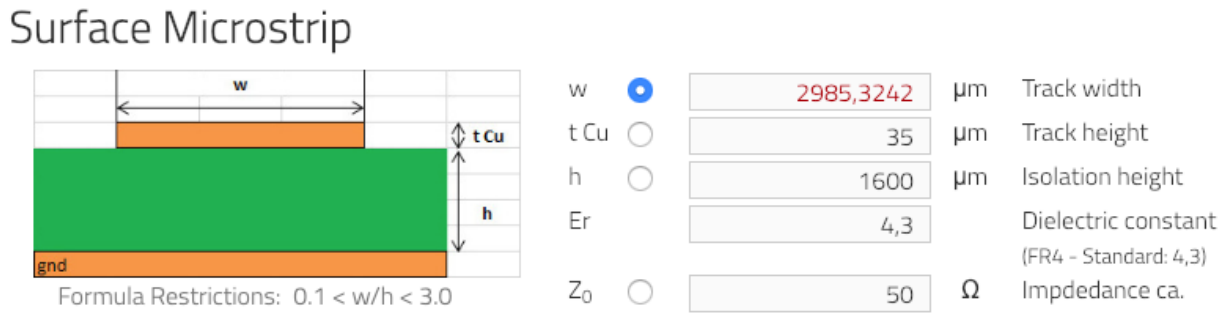
Led

Links

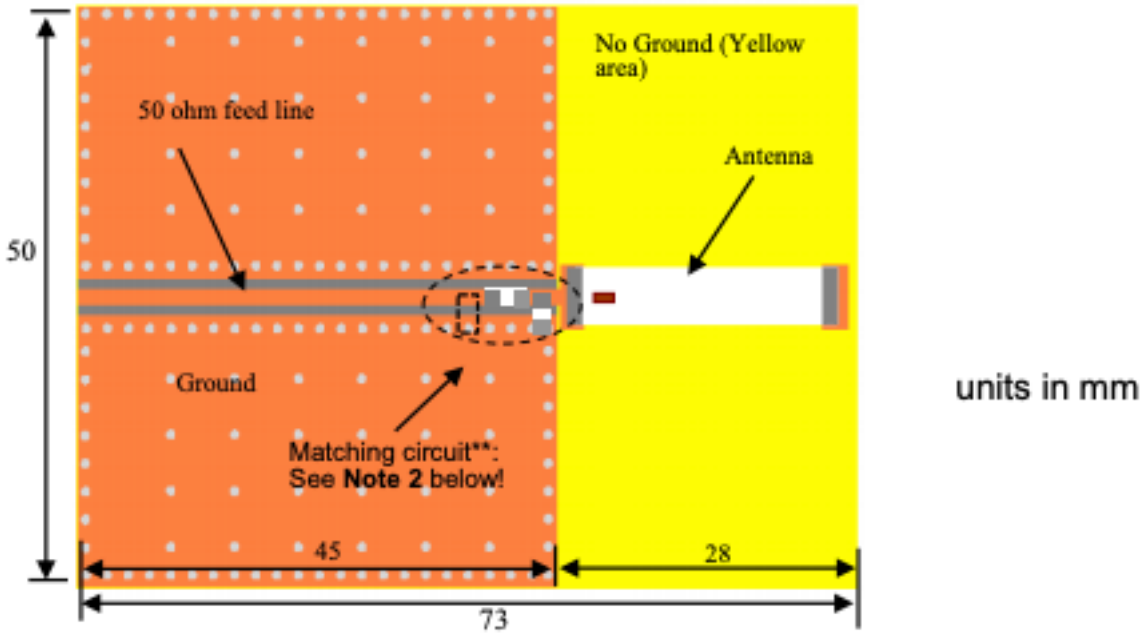
- https://www.instructables.com/id/WiFi-LED-Light-Strip-Controller/

433mHz

Tools



Strip line impedance calculator: https://www.multi-circuit-boards.eu/en/pcb-design-aid/impedance-calculation.html



50 ohm impedance feed line: https://www.disk91.com/2015/technology/hardware/design-a-50ohm-impedance-net-for-rf-signals/

PDF's

- 433 MHz ISM Antenna SMD.pdf

Audio

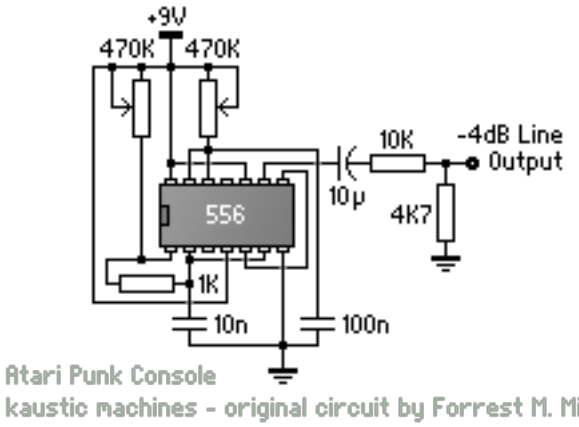
Microphone Array

Links

- Quad op-amp LM3900 (PDF)
- Multi-channel audio mixer circuit using LM3900

Synthesizers

Atari Punk Console Modification (changed speaker to line output) of the Stepped Tone Generator taken from the "Engineer's Mini-Notebook - 555 Circuits" by Forrest M. Mims, III (Siliconcepts, 1984)



Links

- https://compiler.kaustic.net/machines/apc.html

Espressif

ESP 32

Encryption

- https://limitedresults.com/2019/11/pwn-the-esp32-forever-flash-encryption-and-sec-boot-keys-extraction/

ESP 8266

Modbus

Tutorial: https://www.renesas.com/eu/en/www/doc/whitepapers/interface/rs-485-transceiver-tutorial.pdf

Chip brukt i kontroller: SN65HVD485E Half-Duplex RS-485 Transceiver (http://www.ti.com/lit/ds/symlink/sn65hvd485e.pdf)

RS-485 til UART https://www.sparkfun.com/products/10124

Anbefalt modbus usb driver: https://www.sparkfun.com/products/9822

Datasheets: https://www.sparkfun.com/datasheets/BreakoutBoards/USB-to-RS485-Breakout-v11.pdf

For “end of line” motstand kjøp både 120 og 220ohm

Hardware

SDR

LimeSDR

- LimeSDR Mini

Machine learning

Programming

- Rust

Frameworks

Firebase

Alternatives

- Sapphire

Sapphire

Open source alternative to firebase https://sapphire-db.com/start/main

Spring boot

Quarkus The JHipster Quarkus demo app

- https://quarkus.io/

Programming languages

Golang

Links

ORM

- http://gorm.io/

GUI

- https://hackernoon.com/how-to-add-a-gui-to-your-golang-app-in-5-easy-steps-c25c99d4d8e0
- https://github.com/andlabs/ui
- https://github.com/therecipe/qt

Web

- https://github.com/mingrammer/go-web-framework-stars

Div

- https://github.com/avelino/awesome-go

Hammerspoon

This is a tool for powerful automation of OS X. At its core, Hammerspoon is just a bridge between the operating system and a Lua scripting engine. What gives Hammerspoon its power is a set of extensions that expose specific pieces of system functionality, to the user.

https://www.hammerspoon.org/

Rust

Links

Web

- https://rocket.rs/

GUI

- https://github.com/PistonDevelopers/conrod
- http://relm.ml/relm-intro

ORM

- http://diesel.rs/guides/getting-started/

ESP32

- https://mabez.dev/blog/posts/esp32-rust/

Projects

- Crudus MD Notes
- Maximus

Status Light

iOS app

- https://stackoverflow.com/questions/23535355/how-to-detect-call-incoming-programmatically
- https://www.raywenderlich.com/150015/callkit-tutorial-ios

BMW Media Center

- BMW Connected Apps Protocol https://hufman.github.io/stories/bmwconnectedapps
- Shopping list

Articles

- https://hackaday.io/project/161745-can-bus-hacker
- https://hackaday.com/2019/05/09/sniffing-can-to-add-new-features-to-a-modern-car/

Shoppinglist for BMW

Bmw controller

- https://www.cubietruck.com/products/cubieboard4-cc-a80-high-performance-mini-pc-development-board
- https://www.96boards.org/product/hikey960/

Crudus Markdown Notes

En markdown applikasjon som kan synkronisere med git.

Platform

iOS / Android

- Nativescript
- https://libgit2.org/
- https://github.com/libgit2/objective-git
- https://github.com/Raekye/ObjectiveGit-iOS-Example

Desktop

- Electron

Links

- https://libgit2.org/
- https://cocoapods.org/pods/libgit2
- https://github.com/libgit2/libgit2#android

Libraries

JavaScript

- Marked
- Remarkable
- PageDown (and PageDown Extra)
- markdown-it
- Gitdown: GitHub markdown preprocessor

- reMarked.js: HTML-to-Markdown processor
- Kramed: Fork of Marked

Other Editors

- StackEdit: In-browser MD document editor
- Minimalist Online Markdown Editor
- Mou: macOS editor
- Haroopad: Cross-platform editor

Crudus Photos

Tensor flow

Image to text ![Image to text](./Projects/Crudus Photos/A2399A8D-E525-49D5-B751-CC896F304C16.jpg) https://github.com/tensorflow/models/tree/master/research/im2txt

Articles

Building a private, local photo search app using machine learning https://towardsdatascience.com/building-a-private-local-photo-search-app-using-machine-learning-8aeeef8d245c

A step by step guide to Caffe http://shengshuyang.github.io/A-step-by-step-guide-to-Caffe.html

Photo History

Histogram in photography https://www.phototraces.com/photography-basics/histogram-in-photography/

Histogram basics https://docs.opencv.org/3.1.0/d1/db7/tutorial_py_histogram_begins.html

Tools

- Tagbox
- NVIDIA docker support

```
sudo apt install exiftran libjpeg-turbo-progs
```

Ubuntu

Links

Caffe

- https://caffe.berkeleyvision.org/

Model zoo

- https://github.com/BVLC/caffe/wiki/Model-Zoo

Docker image

- https://github.com/BVLC/caffe/tree/master/docker

Diff image

- https://stackoverflow.com/questions/5132749/diff-an-image-using-imagemagick

Image Fingerprint

- https://realpython.com/fingerprinting-images-for-near-duplicate-detection/

Frame Hash

- https://github.com/sschnug/pyVideoHash/blob/master/frame_hash.pyx

Image recognition

- https://www.learnopencv.com/image-recognition-and-object-detection-part1/

Duplicate images

- https://github.com/philipbl/duplicate-images
- https://blog.iconfinder.com/detecting-duplicate-images-using-python-cb240b05a3b6
- https://www.youtube.com/watch?v=AIyJSGmkFXk

OpenCV Line detection

- https://www.codepool.biz/opencv-line-detection.html
- https://docs.opencv.org/3.4/dd/dd7/tutorial_morph_lines_detection.html

Detect horizon

- https://stackoverflow.com/questions/4705837/horizon-detection-algorithm

OpenCV Auto-level / histogram

- https://docs.opencv.org/2.4/modules/imgproc/doc/histograms.html?highlight=equalizehist#cv2.equalizeHist

OpenCV rotate images

- https://www.pyimagesearch.com/2017/01/02/rotate-images-correctly-with-opencv-and-python/

MIT Deep learning

- https://github.com/lexfridman/mit-deep-learning

Tensorflow and docker

- https://www.sicara.ai/blog/2017-11-28-set-tensorflow-docker-gpu
- https://stackoverflow.com/questions/47068709/your-cpu-supports-instructions-that-this-tensorflow-binary-was-not-compiled-to-u
- https://github.com/lakshayg/tensorflow-build

OpenCV 4 https://www.pyimagesearch.com/2018/08/17/install-opencv-4-on-macos/

Crudus Sense

BLE device configuration specification

Name	Type	R/W	Key	UUID
Device name	String	R/W	deviceName	5759f8cc-69ee-11e9-8a12-1681be663d
WiFi Mac	String	R		51ecb1ca-6b85-11e9-a923-1681be663c
WiFi SSID	String	R/W	wifi-ssid	51ecb440-6b85-11e9-a923-1681be663c
WiFi passwd	String	W	wifi-pwd	51ecb594-6b85-11e9-a923-1681be663c
Room	String	R/W	loc-room	51ecb6ca-6b85-11e9-a923-1681be663c
Floor	Integer?	R/W	loc-floor	51ecb7f6-6b85-11e9-a923-1681be663d
Compound	String	R/W	Loc-comp	51ecb922-6b85-11e9-a923-1681be663c
MQTT topic	String	R/W	mqtt-topic	51ecba4e-6b85-11e9-a923-1681be663c
MQTT host	String	R/W	mqtt-host	51ecbf26-6b85-11e9-a923-1681be663d
MQTT port	Integer	R/W	mqtt-port	51ecc156-6b85-11e9-a923-1681be663c
MQTT username	String	R/W	mqtt-user	51ecc2c8-6b85-11e9-a923-1681be663d
MQTT password	String	W	mqtt-pwd	51ecc3fe-6b85-11e9-a923-1681be663d

Name	Type	R/W	Key	UUID
Crudus Accounts username	String	W	crudus-user	51ecc52a-6b85-11e9-a923-1681be663d
Crudus Accounts token	String	W	crudus-token	51ecc6d8-6b85-11e9-a923-1681be663d
Calibration temperature	String (comma separated)	R/W	cali-temp	51ecca5c-6b85-11e9-a923-1681be663d
Calibration humidity	String (comma separated)	R/W	cali-hum	51eccbb0-6b85-11e9-a923-1681be663d
Soft reset	boolean	W	soft-reset	51eccd18-6b85-11e9-a923-1681be663d

MQTT publish Topics

Topic	Payload	Comment

MQTT Subscribe Topics

Topic	Payload	Action	Comment
/sense/ota		Calls OTA for update	

Extensions

Sleep Tracking using an Arduino https://duino4projects.com/sleep-tracking-using-an-arduino/

Reset: https://www.esp8266.com/viewtopic.php?t=9558&start=8

Chip: CCS811 (indoor air quality sensor)

Kaldheim.org

Links

- https://themes.getbootstrap.com/product/milo-magazineblog-theme/

Maximus

Configure components

- Configure BNO055

Robotics

- Robotics

Articles

- Comparing Gyroscope Datasheets

Artificial Intelligence

- AI Notes

BNO055

Installation

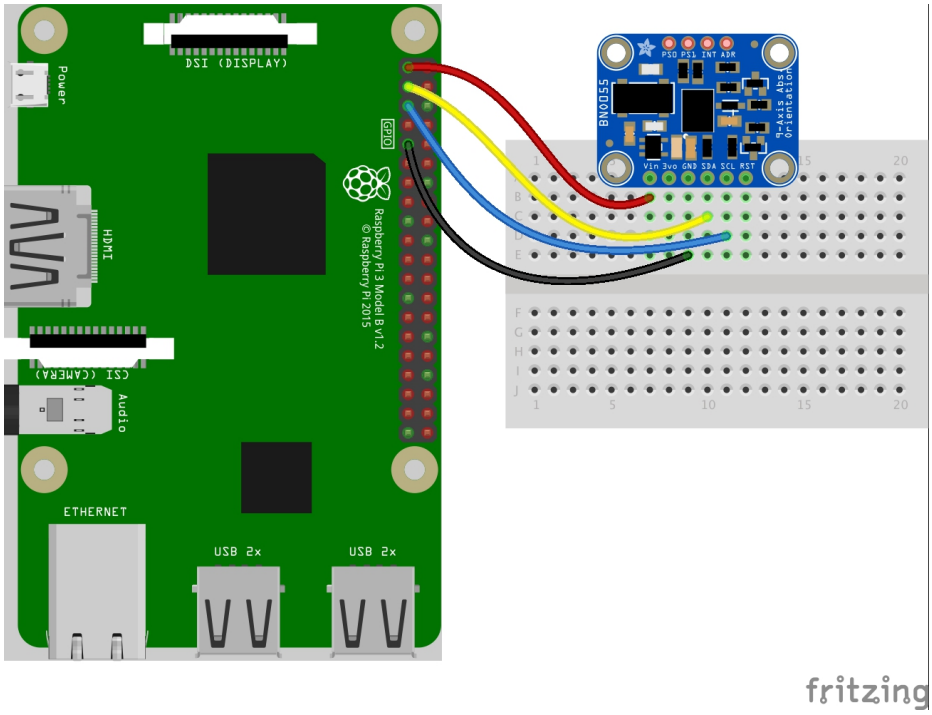
- BNO055 - Python & CircuitPython

```
pip3 install RPI.GPIO
pip3 install adafruit-blinka
```

i2c configuration

- I2C Clock Stretching

In order to use certain I2C sensors, such as the BNO055, you'll need to enable I2C clock stretching 'support' by greatly slowing down the I2C clock on the Raspberry Pi using the device tree overlay.



Edit */boot/config.txt*

```
### Uncomment some of all of these to enable the optional hardware interfaces
dtparam=i2c_arm=on
dtparam=i2s=on
dtparam=spi=on

### Clock stretching by slowing down to 10KHz
dtparam=i2c_arm_baudrate=10000
```

Reboot the device

```
sudo reboot
```

Check for i2c devices:

```
$ i2cdetect -y 1
     0  1  2  3  4  5  6  7  8  9  a  b  c  d  e  f
00:          -- -- -- -- -- -- -- -- -- -- -- -- --
10: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
20: -- -- -- -- -- -- -- -- 28 -- -- -- -- -- -- --
30: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
40: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
50: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
60: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
70: -- -- -- -- -- -- -- --
```

```
mkdir Maximus && cd Maximus
python3 -m venv .env
source .env/bin/activate
pip3 install adafruit-circuitpython-bno055
```

Create new project Example data from sensor:

```
Temperature: 28 degrees C
Accelerometer (m/s^2): (-0.2, -0.07, -9.77)
Magnetometer (microteslas): (-27.75, -4.0625, 32.5)
Gyroscope (rad/sec): (-0.001090830782496456, -0.004363323129985824, 0.0)
Euler angle: (None, None, None)
Quaternion: (0.011474609375, -0.3623046875, 0.9320068359375, 0.0)
Linear acceleration (m/s^2): (1.28, 0.0, -0.01)
Gravity (m/s^2): (-0.21, -0.08, -9.8)
```

PID controller

- Arduino BNO055 PID Gyro sensor
- PID Control for multiple linear actuators

Links

- Adafruit BNO055
- Adafruit BNO055 absolute orientation sensor

Documents

- An introduction and tutorial for PID controllers (PDF)

Books

- Technician's Guide to Programmable Controllers
- PID Controllers: Theory, Design, and Tuning
- PID Control Fundamentals
- Model-Reference Robust Tuning of PID Controllers (Advances in Industrial Control)
- HANDBOOK OF PI AND PID CONTROLLER TUNING RULES (3RD EDITION)

Maximus AI

For termial conversations

- http://www.methods.co.nz/asciidoc/

AIML

- http://www.alicebot.org/aiml.html
- https://www.tutorialspoint.com/aiml/
- http://www.devdungeon.com/content/ai-chat-bot-python-aiml
- https://github.com/pandorabots/rosie/tree/master/lib/aiml

Unicode hex: "\xf0\x9f\x90\xb6"

Artificial Intelligence

- http://blog.hackerearth.com/2015/12/artificial-intelligence-101-how-to-get-started.html

Words, spelling and so on

- https://market.mashape.com/wordsapi/wordsapi
- https://github.com/montanaflynn/Spellcheck-API/
- https://market.mashape.com/sentity/sentity-text-analytics
- https://market.mashape.com/aylien/text-analysis
- https://market.mashape.com/textanalysis/text-summarization
- https://www.meaningcloud.com/developer/
- https://market.mashape.com/faceplusplus/faceplusplus-face-detection
- http://developers.answers.com/

Grammar

- https://learnenglish.britishcouncil.org/en/
- https://github.com/markfullmer/grammark/tree/Version-3
- https://github.com/languagetool-org/languagetool (http://wiki.languagetool.org/public-http-api)

NLP / NER

- Part-of-speech tagging (POS)
- Chunking (CHK)
- Name entity recognition (NER)
- Info: http://nlp.stanford.edu/software/CRF-NER.shtml
- Download: http://nlp.stanford.edu/software/stanford-ner-2016-10-31.zip
- https://github.com/agentile/PHP-Stanford-NLP (old) use patrickschur
- https://packagist.org/packages/patrickschur/stanford-nlp-tagger
- http://php-nlp-tools.com/

Intent parser

- https://github.com/MycroftAI/adapt

Object recognition (caffe)

- http://tutorial.caffe.berkeleyvision.org/caffe-cvpr15-detection.pdf

Image analyze

- https://github.com/Samshal/PHP-Photo-Information
- http://caffe.berkeleyvision.org/

Automatic speech recognition

- http://cmusphinx.sourceforge.net/
- http://kaldi-asr.org/

Questions / answers

- https://github.com/TScottJ/OpenEphyra
- https://cs.umd.edu/~miyyer/qblearn/
- https://github.com/brmson/yodaqa

Lucida

- http://lucida.ai/media/hpca-lucida-djinn-tutorial.pdf

Animations

- https://www.youtube.com/watch?v=_WlqMqXpyxA

OCR / Deep learning

- https://blogs.dropbox.com/tech/2017/04/creating-a-modern-ocr-pipeline-using-computer-vision-and-deep-learning/

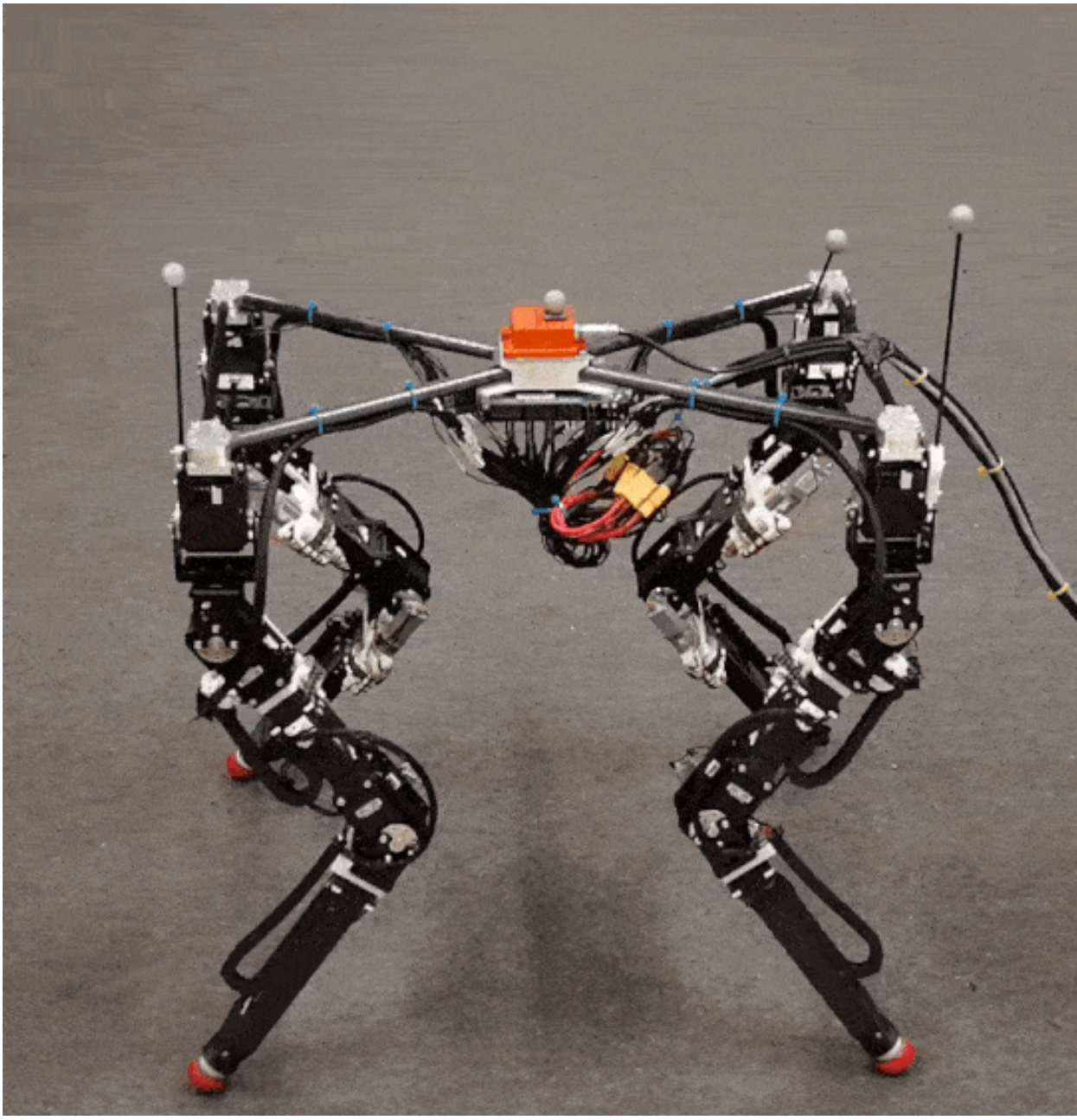
Neural network (arduino)

- http://robotics.hobbizine.com/arduinoann.html

Other Links

- https://github.com/GokuMohandas/practicalAI
- http://www.aicheatsheets.com/

Maximus robotics



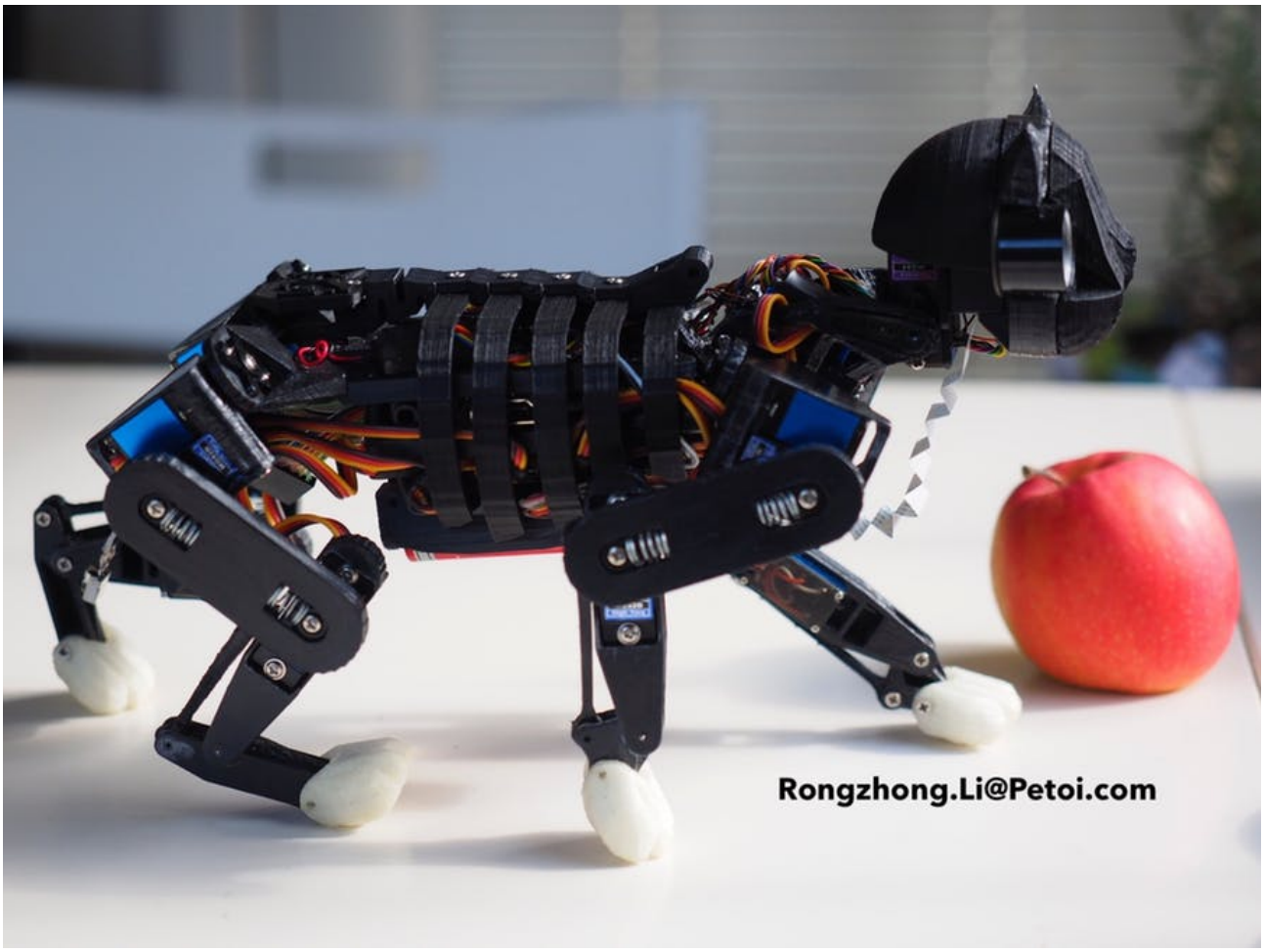
DyRET Robot

Links

- DyRET Documentation

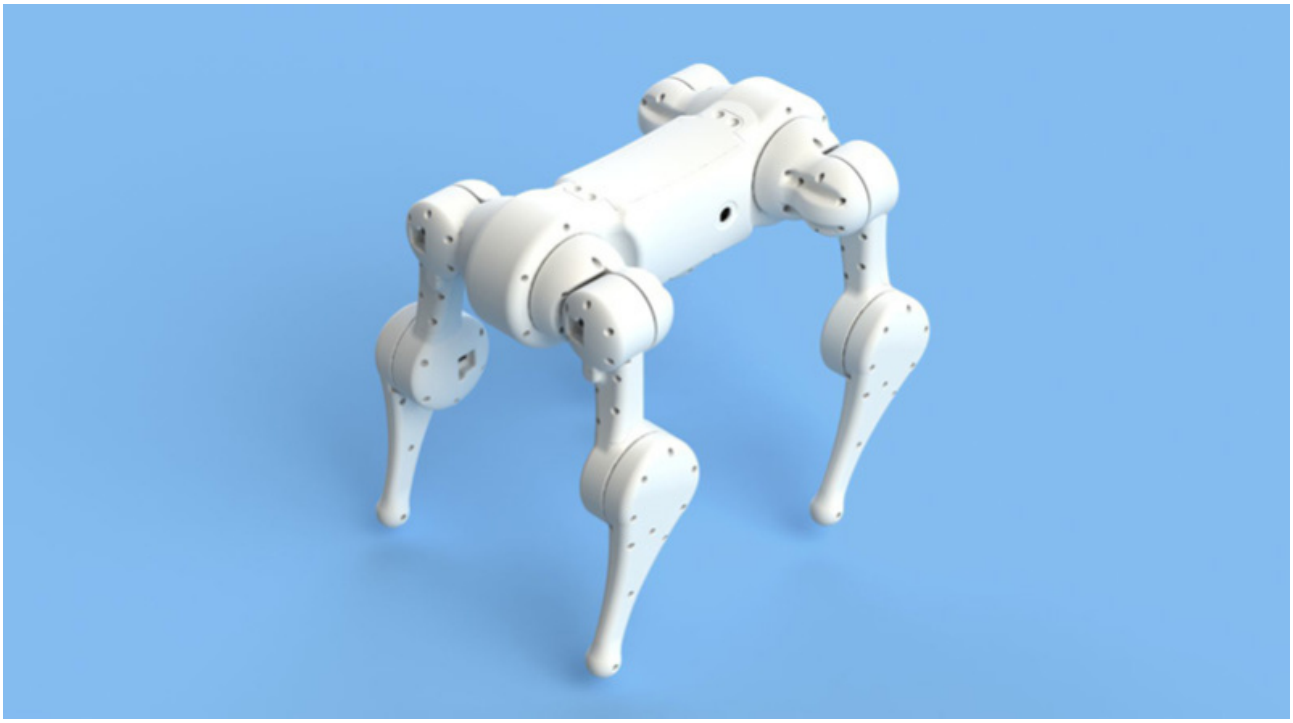
Jetson Nano

- https://www.nvidia.com/en-us/autonomous-machines/embedded-systems/jetson-nano/



Open Cat

https://www.hackster.io/petoi/opencat-845129



Pet dog

- https://hackaday.com/2019/03/30/a-pet-robot-just-like-boston-dynamics-makes/
- https://hackaday.io/project/164493-dizzy-wolf

Mechanical keyboard

Inspiration

- https://github.com/ruiqimao/keyboard-pcb-guide
- https://imgur.com/gallery/fGa13nZ

Motorcycle App

- Profile
  - Navn
  - epost
  - område / by
  - kommunikasjon (hjelm)
- Kjøretøy
  - model
  - årsmodel
  - merke
  - Bensin-logging
    - ⋆ Stasjon / lokasjon
    - ⋆ liter
    - ⋆ tripteller
    - ⋆ dato
    - ⋆ drivstoff type (oktan)
    - ⋆ drivstoff-pris
    - ⋆ fulltank / ikke full tank
  - Vedlikehold
    - ⋆ Sjekkliste
    - ⋆ dekkbytte
    - ⋆ bremseklosser
    - ⋆ Diverse
- Venner
- Grupper
  - inviter venner til gruppe (lukket gruppe)
  - åpen gruppe

    - Åpen gruppe men begrenset godkjenning av admin
- Meldinger
    - venn til venn
    - gruppechat
    - turchat
- Ruter
    - Lag rute via kart
    - Lag rute ved å kjøre
    - Logg rute i bakgrunnen
    - legg til stopp punkt (pauser etc)
- Turer
    - planlegg rute via eksisterende rute
    - planlegg rute ved å lage via kart
    - inviter venner
    - inviter gruppe
    - kjør tur
        - ⋆ legg til møteplass
        - ⋆ legg til stopp (pauser etc)
        - ⋆ logg hvem som er med bassert på godkjenning og automatisk synkronisering av lokasjon
        - ⋆ logg faktisk kjørt rute
        - ⋆ logg tid
        - ⋆ logg tilfeldige forbipasserende (bassert på lokasjon og tid) (frivillig)
- statistikk
    - drivstoff forbruk
    - tid på sykkel
    - Avstand på sykkel

Pip-Boy

Montering

- https://ytec3d.com/pip-boy-3000-mark-iv-assembly/

LCD skjerm

- https://no.mouser.com/ProductDetail/Newhaven-Display/NHD-43-480272MB-ASXN-CTP?qs=sGAEpiMZZMu%2fRY1

Project Management System

Inspiration

- https://codetree.com/

Reflow Oven

Links

Tutorial: http://www.whizoo.com/reflowoven

Ovn: https://www.skousen.no/hvitevarer/ovn/mini-ovn/product/royal-16-ltr/

Isolasjonsteip: https://www.skruvat.no/Isolasjonstape-Reflect-A-Gold-P418338.aspx

Isolasjonsteppe: https://bakerovner.no/produkt/keramisk-isolasjon-rull-1260-c/

Fugemasse / lim: https://coop.no/sortiment/obs-bygg/maling-og-tilbehor/lim-fug-sparkel/casco-heat#product-info

USB Media Controller

Dimensions

Høyde: 35mm x Bredde: 70 - 100mm

Security

LoRaWAN

LoRaWAN Encryption Keys Easy to Crack, Jeopardizing Security of IoT Networks

Shopping lists

Shopping list for home office

Keyboard

- https://www.daskeyboard.com/daskeyboard-4-ultimate/
  - https://www.teknikmagasinet.no/produkter/data-o-tv-spill/tastatur/varemerker/das-keyboard/das-keyboard-4-ultimate-with-cherry-mx-blue
- https://mechanicalkeyboards.com/shop/index.php?l=product_detail&p=3901
- http://www.wasdkeyboards.com/index.php/products/mechanical-keyboard/wasd-v2-105-key-iso-custom-mechanical-keyboard.html

Network

- https://mikrotik.com/product/RB3011UiAS-RM
  - https://www.eurodk.com/en/products/mt-rb/routerboard-3011uias-rm
  - https://freak.no/forum/showthread.php?t=219922&page=28

Software

- Rabbit MQ

Rabbit MQ

Security

- Rabbit MQ access control: http://www.rabbitmq.com/access-control.html
- Multi-tenant SaaS AD: https://vincentlauzon.com/2016/03/10/multi-tenant-saas-with-azure-active-directory-b2b-b2c/

UX - UI

- Colors

Methods

- https://material.io/design/
- http://www.designkit.org/methods

Colors

Links

- https://www.canva.com/colors/color-palette-generator/

Useful stuff

Useful Commands

Terminal recording

Asciinema

```
brew install asciinema
```

1. Install

```
asciinema rec filename.cast
```

2. Record

```
asciinema play filename.cast
```

3. Play

WiFi QR-code

```
qrencode -o wifi.png "WIFI:T:WPA;S:<SSID>;P:<PASSWORD>;;"
```

Rsync

Rsync cheatsheat

```
## syncing folder src into dest:
rsync -avzP ./src /dest
## syncing the content of src into dest:
rsync -avzP ./src/ /dest
```

Unite PDF documents

```
brew install poppler
```

Install

```
pdfunite file1.pdf file2.pdf output.pdf
```

Usage

Vehicles

Cars

BMW - BS82067

Projects

- BMW Media Center

Roofbox

Sledge size

- Lengde: 152 cm
- Høyde: 50 cm
- Høyde, sammenlagt: 30 cm
- Bredde: 47 cm
- Vekt: 16 kg

Repairs

Rear break light Shopping list

- Baklykt skjerm høyre

Rear break light Links

- https://www.bimmerforums.co.uk/forum/f74/rear-light-cluster-failure-fix-led-type-fitted-2008-lci-t115027/
- http://bimmers.no/forums/topic/804388-e91-lci-2010-problem-med-led-blinklys-bak/

Links

- Koed.no
- GSBildeler.no

Motorcycles

MV Augusta - FC7664

Tidy Tail 954,82 kr (ink frakt, eks moms)

- https://evotech-performance.com/products/mv-agusta-brutale-800-tail-tidy-2013-onwards

Speil Styreender Snell Svart Dobbel ledd 219kr + frakt

- https://www.xlmoto.no/speil-styreender-snell-svart-dobbel-ledd#?p

USB-kontakt Booster 12V 329kr + frakt

- https://www.xlmoto.no/usb-kontakt-booster-12v#?p

Eksos

- https://www.designcorse.com/products/qd-exhaust-f3-b3-rivale

Kunder

Aibel

Haugaland Kraft

Hydro