

Discussion

Your own pattern recognition or image processing company?

Introduction

- NVPHBV network
 - Different backgrounds, learn from others

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 - Different backgrounds, learn from others
- Not all students / postdocs → academic positions
- Starting a company an alternative?
 - Related to research topic, freedom, skills

Introduction

- A lot of general information online, e.g.
<http://anothersb.blogspot.nl/2014/08/phd-is-perfect-for-startup.html>
- Specific information for machine learning, image processing etc in the Netherlands?

Introduction

- COSMONiO
- de tijdelijke expert
- Quantib
- TWNKLS



COSMOS + information

Universal Information Systems

CORTEXLAB ● HEALTHLAB ● LIFELAB

London ● Groningen ● Leeuwarden

Since 2012

www.cosmonio.com ● info@cosmonio.com ● @COSMONiO

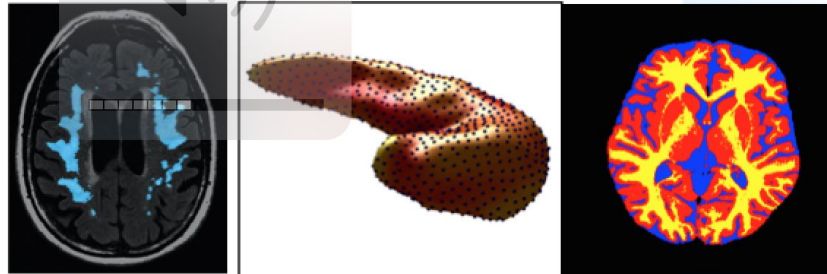


- Application of computer vision
- Customized solutions
- Since 2013, but 15 years of experience in vision

Quantib

Medical Image Quantification

Quantitative imaging biomarkers for improved diagnosis and prognosis





- Founded in 2011, now with 12 fte, GHG Rotterdam
- Started with application development
- Grown into computer vision research
- .. real-time, cross-platform, 3D, outdoor..
- Working for industry, off-shore, musea, new media agencies, toy companies, so very diverse

**“All you need to start a company is a
good idea”**



- Passion
- Knowledge
- Crazy idea (not just good)
- Money
- Talented Team
- Ability to execute (more doing less talking)



good ideas are plenty

you need focus

you need to have fun

you need long term commitment

To start, yes

But starting is just the beginning

Keywords: vision, flexible, motivated,
talent, skills, passion





Many, many good ideas are needed, about marketing, research, development, strategy, people, etc etc

As well as patience, perseverance, passion (twinkles), fun, sacrifice, loyalty (to customers, each other)

**“It’s easy to be self-employed in the
Netherlands”**



Yes and No

BV should be a lot simpler
in order to replace eenmanzaak (British model).



Easy to start..

But provide your own safety net..

Compared to e.g. academia,
you need to arrange
everything yourself





Some other countries indeed have really bad conditions (200 permits to start a business)

But as an entrepreneur you have to set up your own safety net (e.g. pension, insurance.. No unemployment benefits)

“The Netherlands needs more machine learning companies”



Netherlands needs more spin-off companies based on academic research.

Needs a viable financial model to support innovative startups.

The current grant system is poor compared to other leading countries.



You need to find non-academic application
Solution are not technology driven

Support for innovative
companies in NL is much less
than in neighboring countries
and US

Also less investment
opportunities

Vision and culture change
needed





.. not sure.. How many are there now?

Machine Learning is just now being applied in AR. We see many exciting opportunities for place recognition, object recognition. Real-time tracking too? If you have ideas, we should talk!

**“I use skills I learnt from my MSc /
PhD studies every day”**



Yes

Important lesson learnt:
Simplicity is magic.

Simplifying complexity is hard
but worth doing.



Yep.. no computer vision without optics

For business listening skill are key

Yes, skills always come
in handy

Crucial: vision, reflection
and planning





Yes (the Process I learned at industrial design engineering in Delft is invaluable), but practical experience and new knowledge just as important. You have to love to learn.

When your R&D is applied in business immediately, theory and practice are of equal importance, with each feeding the other

“The most favorite part of my job is...”



**Programming something
that doesn't exist.**



Create a solution to a problem

Brainstorming about and
designing products that
will change clinical
practice





Coming up with breakthrough solutions that really help people

For example:

- interactive and precise photogrammetry on an iPad (patented)
- precise real-time outdoor object tracking using multiple cameras and a CAD model (patent pending)

“The least favorite part of my job is...”



Segmentation faults.

Bureaucratic tasks.



Driving a car to a meeting



Quantib

Medical Image Quantification



Having to do many things at once if one of these is deep.. then switching hurts

Having to tell a (prospective) client that something they want/need is just not possible yet

**“If I could do it all over again, I
would...”**



Start earlier.



Talk.. talk.. Talk.. from the beginning..
No one is going to steal your idea..

Quantib

Execute faster

Involve end users even earlier

Test prototypes earlier





Take more time to

- research the market and technology further
 - develop a stronger and even more actionable vision
 - develop a better network of experts/partners
 - develop a stronger list of potential clients
 - do more marketing
- ...before actually starting

**“The best piece of advice I received
is...”**



The best solutions to scientific problems
are simple and elegant.

Jeff Hawkins, Numenta



Why don't you stop talking about it.. And just do it..

“It is about execution”

“Minimal viable product principle”





Begin with the end in mind

**“The best piece of advice I can offer
is...”**



Dream big;
Plan sensibly;
Work hard;
Learn from mistakes;
Do not repeat them.



Always help people. You'll never know who they know.. (some people call this networking)

Quantib

Reflect whether you want to go
for it

Then go for it

Involve your end user from the
start





Follow your contribution (not your passion)

Passions are for hobbies.. Your contribution is where you are really making a difference, helping people