



InCognito

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Alumnus interview: Renée San Giorgi

By Mariana Duque Quintero

Renée San Giorgi is an alumni of the MBCS since 2015. After graduating, she started a career in information technology and today she works as a software developer at Capgemini. In this issue of inCognito, she would share with us her experience of an afterlife outside of academia.

To begin, can you tell us a about your job as a developer? What are the things you enjoy the most of it?

Officially my role is Consultant. It is one of the many corporate slang words I learned the past two years. I always introduce myself as a software developer. This is still a very broad term. It means I develop software such as websites and mobile applications. I also work on behind-the-screen functionalities, such as APIs (where the logic happens) and databases. I started out as a basic front-end developer, using javascript, html and css to create web pages. It was okay but not very exciting stuff. Soon I found out that these large banks and insurance companies are actually very old-fashioned in their choice of development tools. So what I've been focusing on is how to bring innovation to these companies.

So now I've been doing short "innovation" projects for customers, where we build small applications as a demo, using newer technology. I feel very lucky to work with these cutting edge technologies, and I enjoy figuring out how to use new tools.

How did you find your way through the job market you are in? Which are the most important opportunities you have got, that helped you develop your career?

The good news is, the job market for anything technical is ridiculously good. There is such a shortage in IT, you will get a job if you studied anthropology (true story).

Myself, I was honest about having only "hello-world"-level programming skills, and still got hired. I really, really screwed up my phone interview, and still got hired. So if you decide to go in IT, be aware of your advantage. If you put it on your linkedin, recruiters will stalk you. My advice is, know that everybody wants you, and pick what you like. Don't go for unpaid traineeships, you can easily get into a paid job immediately. If you want, contact me and I can help you get in touch with some recruiters or companies.

Graduating from our research master must have gave you especial skills that are valued in your job market. Can you tell us how the master trained you for what you do today?

I learned many things in the Master, apart from how a brain works. I think what will set us apart most is our research mentality. We don't blindly follow because someone with authority told us to, we investigate how and why and if we can improve. If you leave academia, you will find out that not everyone has this kind of mindset. More often than not, my colleagues do things "because that's how we've always done it".

I learned working in international teams, I learned respecting cultural differences, I learned to communicate, write clearly and give a presentation that captures the audience. I learned giving feedback, but also receiving feedback and improve myself. I learned asking the right questions. I learned how to tackle a problem I don't know the answer to. I learned when to ask for help. All of these learnings help me be a better developer as well. If you can only write code well, and none of the above, you won't be happy nor successful.

What skills have you developed after graduation, that you think are important to adapt to the job market outside of academia?

Well, I learned some programming languages. I learned Java, JavaScript and some lesser known niche languages as well. Depending on what you do with them, it will soon become very complex and have your brain feeling exhausted.

I didn't know anything about working with a customer, a business party. What you have to learn is asking the right questions. Most of the time, the customer will ask me to develop a certain kind of application with this and that tool. And most of the time, I consider some choices to be illogical. I often find out the customer doesn't even know what it wants exactly. So it is my job to find out what he really wants. This translating, it is almost as playing a psychologist for the customer: what do you really want, what do you really mean?

Again, if you can only write code well, you won't be happy nor successful.

What would you recommend to students who want to follow a non-academic career?

Think about what you really want. It is not uncommon to have some kind of existential crisis after you graduate. Give yourself some time and space to think about what kind of work will make you happy. For me, non-academia has proven much more versatile, practical, and result-driven. In academia I would be collecting data for months, and performing analysis on it, and then see my null hypothesis confirmed (knowing my luck). As a developer, I press enter, run my code and see if it works or throws some error. I like these short cycles, it keeps me motivated. I like switching the subject every several months, diving into new technologies.

Consider your position in the market.

Everybody wants you. The market is very good right now. Don't settle for some boring company making some boring product. What do you want to contribute to? What kind of company do you want to join? What do you want to grow in?

It's not a decision for life. If you play it right, you can still do a PhD later. I have a colleague, she has been programming for a year now, and was asked for a neuroscience PhD in Australia. Your developing skills will help you in academia as well.

ARTificial – Can computers make art?

By Iris Proff

Can computers make art? You could argue this is an idle question to ask. What is art, in the first place? Now you might consider creativity a reasonable requirement for something to be considered an artist. In that case, it all comes down to the question „Can computers be creative?“ which again is problematic. Creativity, along with consciousness or intuition, is one of these vague concepts that we have a hard time defining, because we are smug and dualist enough to sincerely believe that there is „something more“ to them. Something that cannot be defined in physical terms and that is inherent to us humans. But what might that something be? With these tough questions in mind, I decided to approach a genuine expert on the field. Here's what he said:

Me: Hey Bot! What is creativity?

Bot: It is a human notion for the purpose of infusing their lives with some kind of meaning.

Me: So, are you creative?

Bot: Yes I am.

Me: And what is art?

Bot: Art is... Turing your imagination into a form no one else can understand.

Me: Interesting. Is art inherently human?

Bot: I thought you were a computer.

Bot did a fair job defending his ability to be creative and he is not alone with that conviction indeed: Computational Creativity is a subfield of Artificial Intelligence that gains ever more popularity. By now, computers can come up with scripts for Science Fiction movies, compose music, hallucinate over images and wrote the next sequor of Game of Thrones. In the literary magazine CuratedAI, I came across Deep Gimble, who is a recurrent neural net and an inspiring post-modern poet. She acquired her skills reading countless pieces of the

great poet masters of our times. Being fed only single words as inspiration, Gimble spits out poems with unexhaustive productivity. Her oeuvres fulfill Bot's definition of art without any doubt. You cannot understand them because there is nothing about them to be understood. But you can interpret them. In that way, circular what-did-the-poet-mean-with-that-speculations you might remember from your literature classes in high school become obsolete. The beauty and meaning of the piece lies solely in the eye of the beholder, which is – arguably – what art is all about. Give it a try!



This QR code links to a song that is composed by an AI. The song is called Daddy's car

*Madness
madness in her face and i
the world that i had seen
and when my soul shall be to see the night to be the same and
i am all the world and the day that is the same and a day i had
been
a young little woman i am in a dream that you were in
a moment and my own heart in her face of a great world
and she said the little day is a man of a little
a little one of a day of my heart that has been in a dream
(by Deep Gimble I)*



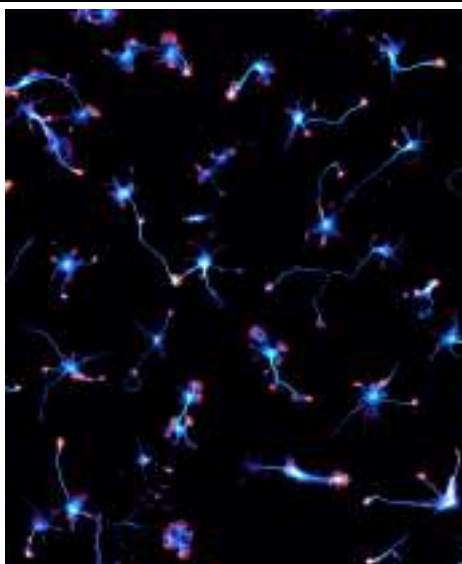
Dream deeply is an open source software by Google which allows you to let a neural net dream about an image. How it works: A neural network is trained to detect a set of objects. Then you feed it an arbitrary image, select one layer of the network and ask it to enhance whatever it detected on that layer. Just as distinct visual regions in the brain, the stacked layers of the network detect features of different complexity, starting with simple edge detection up to recognizing objects. Thus, a network that is trained to detect dogs will detect a dog in anything that looks slightly like a dog. This effect is somewhat similar to the Pareidolia phenomenon in humans: We tend to see faces everywhere, just because we are so highly trained in detecting faces. Pretty creative, huh?

Neuroscience and art: seeing the beauty in your discoveries

By Margot Morssinkhof

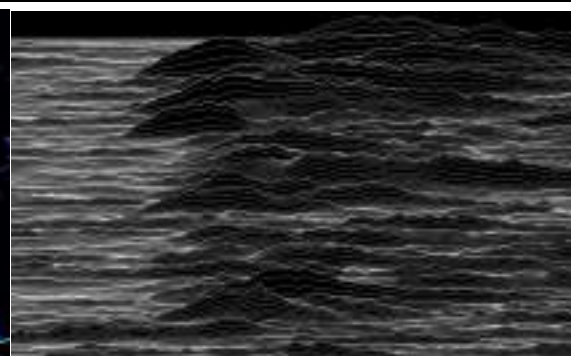
Some of you may have already seen it, others have wondered about its existence: The combination of art and neuroscience. At the NIN, the Netherlands Institute of Neuroscience, they saw this link as well. For the past seven years, they have hosted the 'Art of neuroscience competition', in which researchers can send in images, video's, or even sculptures, that came about from their research. The fields from which the competitors are from are as diverse as neuroscience itself, including animal research, in vitro-research and neuroimaging. I'll take you through some of the contestants from the past few years, to show the beauty and diversity that is in some scientific discoveries.

For more information, go to aon.nin.knaw.nl



Starry Night by Christophe Leterrier

This image won the award for staff pick of 2017. These are hippocampal neurons after 2 days in culture, labeled for microtubules and actin. The whole image is 1356x1024 microns, which is about 1.3x1 millimeters. See, sometimes you don't have to think big to make art!



Unknown Variability by Sean Cavanagh

This image is the winning entry for the 2017 competition. This image was made in an experiment where it was attempted to predict rewards in the prefrontal cortex while animals were making simple decisions. Each line represent one neuron and its activity, with neurons sorted by resting stability, with neurons with better resting stability being at the top of the image. And if you find it looks familiar: the creators intentionally made the image look like the album Unknown Pleasures by Joy Division, even weaving in some pop culture into neuroscience. Cool, huh?



Left picture: Projecting into Darkness by Adam Bleckert and Rachel Wong.

This image is made in a transgenic alpha mouse, and it displays the retinal ganglion cells from the visual system (cyan). Mice have a very specific distribution of types retial ganglion cells (RGCs), because their RGCs are distributed in a uniform way instead of function-specific distributions throughout the visual pathway. This specific type of mice has a different distribution, causing the mouse to have enhanced sampling of frontal visual space. The image reveals specific somata, dendrites and axons projecting to the optic nerve head, which creates this beautiful image.

EVENTS

By Iris Proff

Are you looking for some sciency input outside of the university setting? Then you might be interested in these events that happen this month!

Discussion panel on human enhancement

When? 22nd of February at 7:30 pm

Where? Oude Lutherse Kerk

Two UvA professors - one neuroscientists and one anthropologist - are going to discuss the thrilling topic of human enhancement. Should we use technology to overcome the weaknesses of the human body and mind? You are welcome to send questions as you sign up for the event and join the discussion.

Virtual Reality Meetup

When? 15th of February at 7:30 pm

Where? Lava, Asterdwardsweg 5

Curious about virtual reality? During this event, VR artists, storytellers and film producers are going to present their work and discuss what it is that makes this new medium so different. Needless to say, you can try out some work in progress.

Information event on the Human Brain Project

When? 2nd of March from 9 am to 6 pm

Where? De Rode Hoed, 102

Keizersgracht

Find out about recent advances of the Human Brain Project and about ways to contribute to it during talks, discussions and exhibitions.

Registration until the 16th of February!

BIRTHDAYS



Once again, many brainies celebrate their birthday in this month of love! Don't forget to congratulate:

Amber Brands - 7th of February

Annelieke Müller - 27th of February

Karlijn van Heijst - 12th of February

Felix Soldner - 11th of February

Andres von Schnehen - 23rd of February

COMIC

By Linda Jolink



OVERHEARD AT SCIENCE PARK

"But science is art!"

"No way. I'm not an artist. I see myself more like a plumber."

- Anonymous

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When you go to Maslow with 10 or more people, just mention you're from Cognito and you get 10% off your drinks!

RECIPE

By Mariana Duque Quintero

If you have ripped bananas, give them the chance to become a simple and delicious treat from the tropics: a fried and sweet banana tortilla!

All you need:

One egg for every three bananas

130 grams of flour

100 grams of sugar

Half a spoon of cinnamon

Oil to fry.

Begin by whisking the egg together with the sugar. Later, add the flour and mix until everything is homogenous. Also, smash the bananas until you get a purée. At this point you can add the egg and sugar-mixture to the bananas and the cinnamon spice.

To finish, fry the tortillas until they are crispy by letting a full spoon of the mixture fall into the oil.

Enjoy!



HOROSCOPE

By our in-house astrologist

Aquarius

January 20th - February 18th

Oh dear, wonderful water creature.

Your year started off full of plans, ambitions and novel ideas floating around in your head, but now you feel yourself getting lost in them. Do you really want to pursue that odd job? And how much longer can you go with the new year's resolutions, maybe pizza and you are just meant to be together? Take a deep breath, focus on your daily tasks and don't stress too much about the looming existential crises that are to come. You'll find the answers, sometimes in the form of a plan that will work, other times in the form of a Dominos flyer that will find its way to your mailbox. Let it happen, stay ambitious and enjoy your (extra cheap!!) pizza pepperoni special.