

AMSTERDAM, THE NETHERLANDS : 1 YEAR POSTDOC POSITION

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This post-doctoral position is framed under the SME innovation association pilot funded by the H2020 Innovation Associate Grant. In this context, iThrive is committed to develop an empathetic responsive model for Jean, iThrive's coach conversational agent. iThrive is looking for a post-doctoral research associate with expertise in Computer Science to join the core development team. The candidate is tasked with the delivery of an empathic conversational model prototype. iThrive offers a full time position for 12 months, a competitive salary, travel and training costs and reimbursement of relocation costs. The availability of this position is dependent on the award of the H2020 SME IA Grant.

We interact with today's "Intelligent Personal Assistants" primarily in their role as sales assistants. We are often forced to adapt to the communication dictated by the mechanical nature of the algorithm that is driving the conversational agent. The notion that the assistant really understands our thoughts and emotions and is able to mentalize is absent. In a professional coaching context empathy is the most important factor for a successful intervention. Only when we perceive that we are seen, heard and understood without judgement, we can open up psychologically to the unknown and the personal growth that lies in embracing new thoughts and practicing new and constructive behaviors.

Advances in emotion recognition and behaviour and natural language technologies allow us to envisage virtual agents that are responding empathetically; converse in a natural manner; respond to moods and emotional states; and evolve in response to user behaviour.

The post-doctoral candidate will join the iThrive team (<https://www.ithrive.nl>), a tech start-up in positive psychology and professional coaching. The post-doctoral candidate will also have access to iThrive's unique platform that drives the conversational agent Jean. The candidate will collaborate with members of the iThrive team and Professor Hanan Salam from the EMlyon Businessschool.

About iThrive

Stress' deadly toll may be rising but Startup iThrive delivers the antidote by helping you to reach your goals and thrive. Their program offers evidence based behavior change training that has proven to be 4 times more effective than the golden standard. After a 6-session intake you continue to have bi-weekly coaching conversations plus a daily check-in with the supportive chatbot artificial intelligent (AI) coach Jean, who is available 24/7 wherever you are - as long as you have your smartphone with you. iThrive has run a couple of B2B pilots and is gearing up to crack the code of empathy and happiness for the use of artificial intelligence.

We are 8 dedicated professionals. The team is drawn by the compelling vision of tipping the scales in the world towards maximizing the thriving of people. One might say we are optimists. We aspire to live a team culture of inclusiveness, openness, science and care for people. Our team brings a wealth of experience in ICT, engineering, research, business development and coaching.

The research will be carried out in The Hague or *Den Haag*, the capital of the province of South Holland, situated at the western coast of the Netherlands. It is also the seat of government of the Netherlands and hosts the International Court of Justice, one of the most important courts in the world. With a metropolitan population of more than 1 million, it is the third-largest city in the Netherlands, after Amsterdam and Rotterdam. The Hague is a study in contrasts — a captivating blend of new styles and old masters in a historic city synonymous with peace and justice. With easy access to both city and beach, The Hague offers everything from royal palaces and timeless Dutch fishing harbors to endless opportunities to stroll the streets and join the music and culture festivals.

General Objective

The general objective is to create, in collaboration with computer scientists as well as research psychologists, professional coaches or social workers, an empathetic responsive algorithm for Jean iThrive's coach conversational agent. By infusing machines with empathy, our goal is to achieve new levels of human-machine interaction, in which the communication between a user and conversational agents emulates the empathetic nature of a professional coaching conversation, in which the coach empowers the user to grow psychologically.

A prerequisite for the creation of a virtual coach is to understand how “real” coaches interact and respond empathetically to the behaviours and reactions of users. This is the core of this project. It focuses on the cues from the user and uses those signals to generate empathetic and context driven responses.

Main activities

The main activities of the post-doctoral fellow will be:

-To establish a taxonomy of empathetic behaviours from recorded 1-to-1 coaching conversations, with the help of research psychologists, professional coaches and social workers.

-To establish a database of topics and related suitable interventions, with the help of research psychologists, professional coaches or social workers and an intern.

-To model the invariants of topics and related suitable interventions, through an approach based on GAN's (generative adversarial networks), to create new responses of empathetic nature.

-To validate these models a posteriori by studying the users' interaction with Jean using the the created model. This will validate that these manipulated invariants will generate a perception of being seen, heard and understood by the user and foster an empathetic interaction. We will propose both a subjective evaluation of the empathy perceived by the user but also a quantified evaluation of the interaction via comparisons between the coaching conversations observed in real and virtual situations.

Skills

The candidate must have a computer science PhD degree, with a preference in machine learning. The candidate must have knowledge of Python and preferably C#. The candidate should also be comfortable with as much following items as possible: Experience in natural language processing ; Experience in carrying out users studies; Good knowledge of programming tools (e.g., matlab) and statistics; Good spoken and written English; Good communication skills. This post doctoral position is framed within the development efforts of iThrive, thus the candidate will have to interact with other members of the team and assist in the meetings.

Contract Duration under the H2020 Innovation Associate Grant 12 months

Gross Salary in EURO € 72,800

Other Benefits excellent start-up environment, 25 days of holidays, competitive salary, flexible schedule, support in personal development (training and conferences)

Reallocations costs € 8,000

Type of contract Full time

Working Hours per Week 38

Contact: Nadja Muller-den Blijker nadja@ithrive.nl