



INNOLABS

Awarded Projects Interview

Project Name	H2A2: A Healthy Heart with Automated Assistance
Company name	VicarVision

1. What is the company's business activity?

VicarVision develops state of the art solutions and products for computer vision. The technologies we develop are aimed to create vicarious perception. We want our machines to perceive and name the objects and events presented to them through cameras, in the same way that we would; so they can keep an eye on things for us. VicarVision has a special interest in perceiving people's behavior. FaceReader™ is the premier product for automatically evaluating emotional expressions in the human face. It is used in behavioral research institutes all over the world in studies assessing the usability and user experience of software systems, food preference and video conferencing interactions, to name a few.

2. What is the project about?

In this proposal, we developed a new mobile application that can be used to measure emotions and heart rate unobtrusively. Mood disorders are highly prevalent in elderly; therefore, to facilitate healthy ageing it would be beneficial to have an extra entity keeping an eye out on someone's heart. The camera of a tablet or mobile phone can be used to obtain useful health related metrics from the face. Facial expressions and expressiveness can reveal someone's mood and an innovative technology called remote PPG can estimate heart rate from skin color. Facial features can also be used to train computer algorithms to recognize unhealthy patterns. In collaboration with PLUX, a Portuguese company specialized in advanced biosignals monitoring platforms, we collected data from participants while they were using a mobile device. This data can be used to validate the heart rate measurements with wearable sensors and further develop our machine learning algorithms.

3. How did the idea come about?

We have employees with expertise from behaviour science and clinical psychology, which together with the existing software that we have formed this idea.

4. Who are the core partners of the project?

Plux and IT - Instituto de Telecomunicações.

5. How did this collaboration between the partners arise?

We have collaborated with Plux in other projects and they found the other Portuguese company that did the data collection.

6. How did you hear about INNOLABS project?

Through partners from the I3b network.

7. What is the current status of the project?

The project is still ongoing, we expect to finish data collection in October and then we will be able to continue developing our product and algorithms.

8. How has INNOLABS supported the development of your project?

With the Innolabs funding we were able to collect this valuable high quality dataset that includes multiple physiological measurements thanks to the sensors of PLUX and multiple camera recordings. This kind of data is crucial for further development of our techniques. We are also getting valuable grant writing assistance that can hopefully enhance our change of getting enough funding to progress our application to a larger scale within the research industry.

9. What are your future plans after INNOLABS?

We will continue to work on adapting our software for a mobile platform and are applying for a SME phase 2 grant.

10. Would you recommend INNOLABS to other companies?

Yes, although we couldn't find the partners we initially sought after and the relevant expertise was missing, it is a nice network that offers some interesting support. Hopefully we can still find additional insights and/or collaborations at the final event. It is also a good way to start a new project into a new market. There is still some room for improvement within INNOLABS regarding the communication and information provision.