

CMU Portugal

Undergraduate Internship Program - Spring 2017

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This report summarizes the activities carried out during my internship at CMU, which took place from February 1st to April 28th, 2016. I was hosted and advised by Professor Manuela Veloso, and had the opportunity to work in the Machine Learning Department and join the CORAL group. I was sponsored by Dr. Manuel Marques and Professor João Paulo Costeira at Técnico Lisboa, who accompanied and advised the project in these three months.

The project was modified a few months before leaving for CMU, and consisted of putting together a robotic arm that performed assisted feeding. Through professor Manuela, I got in contact with professor Howie Choset and his students at the Snake lab, that provided a modular arm where we developed the work and offered some advice throughout the project.

By combining state of the art vision algorithms to track a person with control and planning techniques, we developed a closed-form system that shows promise in the task of assisted feeding. The project will be continued at Técnico Lisboa, and a one year proposal was already submitted for funding. From this work, a paper was also submitted to the EPIA (Encontro Português de Inteligência Artificial) Conference.

At CMU, I also had the opportunity to attend several talks and events on many interesting topics in Robotics and Machine Learning, and to attend a Machine Translation reading group, by invitation of professor Graham Neubig. CMU is an amazing University with a lot going on, and you can learn a lot from all the different people and projects being developed.

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