

# Miltiadis Marios Katsakioris

Computer Scientist

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## Profile

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PhD student at Heriot-Watt University in Computer Science. Member of the Interaction Lab team currently funded by the DataLab and Seebyte to investigate machine learning techniques for communicating with autonomous systems through natural language interaction, where the user can interrogate the system with regards its autonomous behaviour and the data it has collected.

## Work Experience

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### Heriot-Watt University - Enhanced Lab Assistant

07/2018 – 11/2018

- I was an enhanced lab helper in the course Artificial Intelligence and Intelligent Agents for master students. My main responsibilities included supervising, assisting and marking the students through out the semester during their labs.
- I was also an enhanced lab helper in the course Software Development in C for a group of 30 [ES-IEA](#) Exchange Students. I created the second half of the labs and tutorials for this course and my main responsibilities were supervising, assisting and marking the students during the labs and helping during the tutorials with teaching or answering questions that the students might have had through out the semester.

### Digital Bridge - Intern VR Software Engineer

07/2015 – 06/2016

- Implemented the main code for a VR decorating experience using Oculus Rift and LEAP motion for 3D visualization and hand / finger tracking respectively. The whole project was written in Visual Studio using C++ and OpenGL.
- Wrote and implemented scripts in python for computer vision testing.
- Collaborated with product management to design, build and test systems.
- Debugged and modified software components.

### The University of Manchester - Software Engineer Intern

06/2014 – 07/2014

- Worked in a team of 10 brilliant people in the Computer Science department.
- Helped to organize the biggest animation contest for kids throughout UK.
- Developed real-time data stream of data for visualization, from twitter, using Python.
- Designed, developed and tested a hardware solution for demonstrating the power of Neurosky's Brain Device combined with a RaspberryPi and PiFace, using Java.

## Volunteer

### 19th ACM International Conference on Multimodal Interaction - Student Volunteer

13/11/17-17/11/17

The 2017 International Conference on Multimodal Interaction, ICMI 2017, was held in Glasgow, Scotland at the Hilton Grosvenor hotel. ICMI is the premier international forum for multidisciplinary research on multimodal human-human and human-computer interaction, interfaces, and system development.

My job was to help the organisers with setting up the equipment, making sure all the electronics were working fine, assist any professor with anything they might need and interact with all the guests. It was a great experience because I also had the chance to attend my first conference as a PhD student and meet other researchers and discuss with them about my research.

### **The University of Manchester – PASS Leader**

09/2014 – 09/2015

PASS is a scheme run by 2nd and 3rd year students in order to provide guidance and any necessary assistance to 1st and 2nd year students respectively.

My job as a PASS Leader was to organize weekly meetings with a certain group of first year students and talk about any challenge they had either in their studies or university life, such as peer pressure, managing their university deadlines etc.

## **Education**

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### **Heriot Watt University – PhD in Multimodal HRI at Interaction Lab**

10/2017 – 06/2020, Edinburgh, Scotland

The goal of this PhD is to investigate data-driven, machine learning techniques for communicating with autonomous systems through natural language interaction.

### **The University Of Manchester – Bachelor of Science with Honours (2.1) in Computer Science**

09/2013 – 06/2017, Manchester, England

Final year research thesis on Deep Reinforcement Learning and testing on ATARI games inspired by Google's Deep Mind Deep Q Learning. Used a simple neural network architecture with no external libraries to train a policy gradient agent to play Pong and Space Invaders without any prior experience or special casing.

**Relative courses :** Mathematical Techniques for Computer Science, Fundamentals of Artificial Intelligence, Machine Learning, Advanced Computer Graphics, Natural Language Systems, Computer Vision, Advanced Algorithms

### **3<sup>rd</sup> General Lyceum of Dafni (High School) – Apolytirion with Pan-Hellenic Examinations (A-levels equivalent)**

09/2010 – 06/2013, Athens, Greece

## **Key Skills**

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### **Hard Skills**

- Deep Reinforcement Learning
- NLG
- Neural Networks
- Data Analysis
- Java – RaspberryPi internship project
- OpenGL – For 3D graphics using C++
- NLTK – for Natural Language Processing using Python
- MATLAB and Python – machine learning and computer vision
- Django Python – for web development
- Machine Learning frameworks used – Tensorflow, Theano, Caffe
- Oculus SDK & LEAP motion SDK combined using C++

### **Soft Skills**

- Leadership – Guided a group of students as a PASS Leader
- Problem solving
- Teamwork and collaboration – university and industry experience
- Creativity, self-motivation – proposed and researched individual thesis project
- Flexibility