

# Si-Qi LIU | Curriculum Vitae

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## Education

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**MSc in Computer Science, Keble College, University of Oxford, UK**

Graduated with distinction, supported by COSF B&J Lloyd Family Trust scholarship. Oct.2015–Feb.2017

**Diplôme d'Ingénieur (M.Eng), CentraleSupélec, France**

Top French Grandes Ecole in Engineering, ranked 1st on Metz campus, GPA 3.9/4.0. Jun.2013–Feb.2017

**Licence II, Université de Technologie de Compiègne, France**

Overall GPA 3.99/4.0, supported by AMESON scholarship. 2011–2013

## Experiences

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**Google DeepMind**

**London**

Senior Research Engineer

Mar.2017–Present

- My research focused on the intersection of multi-agent, continuous control and deep reinforcement learning.
- Built research infrastructure supporting large-scale experiments across DeepMind.

**Google Research**

**Mountain View**

Research Intern, Research & Machine Intelligence (Hosted by Kevin Murphy)

Jul.2016–Nov.2016

- Our work (arxiv.org/abs/1612.00370) was published with a spotlight talk at ICCV 2017.

**Google**

**New York**

Software Engineer Intern, Adwords-Optimisation

Jun.2015–Sep.2015

- Built large-scale distributed evaluation pipeline for CTR/conversion rate prediction models.

**Collabora, The Document Foundation**

**Remote**

Consultant Software Engineer (part-time)

Feb.2015–May.2015

**Google**

**Zurich**

Software Engineer Intern, Search-Knowledge

Jun.2014–Sep.2014

- Built models for entity resolution in search queries and web documents.
- Work presented at the Google EMEA intern summit.

**LibreOffice**

**Remote**

Google Summer of Code contributor

Jul.2013–Jan.2014

- Built LibreOffice Impress remote control for iOS, featured in LibreOffice 4.2 and LibreOffice developer conference.

## Publications

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**Improved Image Captioning via Policy Gradient Optimization of SPIDER**

*Spotlight*, ICCV 2017, International Conference on Computer Vision

Siqi Liu, Zhenhai Zhu, Ning Ye, Sergio Guadarrama, Kevin Murphy

**Emergent Coordination through Competition**

*Poster*, ICLR 2019, International Conference on Learning Representations

Siqi Liu, Guy Lever, Josh Merel, Saran Tunyasuvunakool, Nicolas Heess, Thore Graepel

**Hierarchical Visuomotor Control of Humanoids**

*Poster*, ICLR 2019, International Conference on Learning Representations

Josh Merel, Arun Ahuja, Vu Pham, Saran Tunyasuvunakool, Siqi Liu, Dhruva Tirumala, Nicolas Heess, Greg Wayne

## **The Body is not a Given: Joint Agent Policy Learning and Morphology Evolution**

*Poster*, AAMAS 2019, International Conference on Autonomous Agents and Multiagent Systems

Dylan Banarse, Yoram Bachrach, *Siqi Liu*, Chrisantha Fernando, Nicolas Heess, Pushmeet Kohli, Guy Lever, Thore Graepel

## **Observational Learning by Reinforcement Learning**

*Poster*, AAMAS 2019, International Conference on Autonomous Agents and Multiagent Systems

Diana Borsa, Nicolas Heess, Bilal Piot, *Siqi Liu*, Leonard Hasenclever, Remi Munos, Olivier Pietquin

## **Reinforcement Learning Agents acquire Flocking and Symbiotic Behaviour in Simulated Ecosystems**

*Poster*, ALIFE 2019, Artificial Life

Peter Sunehag, Guy Lever, *Siqi Liu*, Josh Merel, Nicolas Heess, Joel Z Leibo, Edward Hughes, Tom Eccles, Thore Graepel

## **A Generalized Training Approach for Multiagent Learning**

*Oral*, ICLR 2020, International Conference on Learning Representations

Paul Muller, Shayegan Omidshafiei, Mark Rowland, Karl Tuyls, Julien Perolat, *Siqi Liu*, Daniel Hennes, Luke Marris, Marc Lanctot, Edward Hughes, Zhe Wang, Guy Lever, Nicolas Heess, Thore Graepel, Remi Munos

## **V-MPO: On-Policy Maximum a Posteriori Policy Optimization for Discrete and Continuous Control**

*Poster*, ICLR 2020, International Conference on Learning Representations

H Francis Song, Abbas Abdolmaleki, Jost Tobias Springenberg, Aidan Clark, Hubert Soyer, Jack W Rae, Seb Noury, Arun Ahuja, *Siqi Liu*, Dhruva Tirumala, Nicolas Heess, Dan Belov, Martin Riedmiller, Matthew M Botvinick

## **Languages**

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**French:** Bilingual Proficiency (EU C2 Proficiency)

**English:** Bilingual Proficiency, TOEFL 115/120

**Chinese:** Native Speaker

**Japanese/German:** Elementary Proficiency

## **Organisations**

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### **Rézo, CentraleSupélec**

Vice-President

2013–2015

- Provides web services and network infrastructure for students in Metz area.
- Organised meet-ups around software engineering topics (git, ROS, Django, Python, Android/iOS).

### **Lumière d'Afrique, CentraleSupélec**

Volunteer

2013–2014

- Fund-raising for solar-powered lighting installation in schools and hospitals in Cameroon.

### **UTCoupe, Université de Technologie de Compiègne**

Vice-President

2012–2013

- Participated in the French Robotics Cup, ranked 18<sup>th</sup> out of 144 teams.

### **ClubChine, Université de Technologie de Compiègne**

Founder, President

2011–2012

## **Other Projects**

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### **txt2calories: Nutrition Estimation via Natural Languages**

Computational Linguistics Group, University of Oxford (supervised by Phil Blunsom) Feb.2016–Jul.2016

### **metabolise: Fitness Tracking with Nutrition Estimation from Text**

3<sup>rd</sup> place at hackathon HackCambridge, Cambridge, UK

Jan.2016

### **im2food: Object Detection for Food with Convolutional Neural Networks**

Machine Learning and Interactive Systems Lab, CentraleSupélec

Jan.2015–Jun.2015

### **Gesture-based Remote Controller for Drones**

Machine Learning and Interactive Systems Lab, CentraleSupélec

Dec.2013–Sep.2014