

# KEXIN GU BAUGH

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## EDUCATION

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### Imperial College London – PhD Computing

2021 - 2025

- Research area: neuro-symbolic AI – combining classical logic-based learning with neural networks
- Supervised by Prof. Alessandra Russo. Member of [SPIKE](#) research group

### Imperial College London – MEng Computing

2017 - 2021

#### Computing (Artificial Intelligence and Machine Learning) – First Class Honours (77.57%)

- Thesis: [HACR: Hybrid Architecture for Concept Reasoning](#)- 86.00%
- Research relevant modules: Logic-Based Learning - 76.97%, Knowledge Representation - 72.20%, Deep Learning - 73.83%

## PUBLICATIONS

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### Neuro-symbolic Rule Learning in Real-world Classification Tasks

Kexin Gu Baugh, Nuri Cingillioglu, Alessandra Russo, in Proceedings of the AAAI 2023 Spring Symposium on Challenges Requiring the Combination of Machine Learning and Knowledge Engineering (AAAI-MAKE 2023) - [full paper](#), code [part 1](#) & [part 2](#)

## EXPERIENCE

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### Teaching

#### Data Structure and Algorithms - Graduate Teaching Assistant

2023/2024, 2024/2025

Master course, Imperial College Business School

#### Introduction to Prolog - Graduate Teaching Assistant

2021/2022, 2022/2023

Undergraduate course, Imperial College London, Department of Computing

#### Logic - Graduate Teaching Assistant

2021/2022

Undergraduate course, Imperial College London, Department of Computing

### National Institute of Informatics - *Research Internship*

Jan - May 2024

Joined the Inoue Lab and supervised by Prof. Katsumi Inoue. Worked on the project of neuro-symbolic learning in Boolean Networks.

### Cisco ThousandEyes - *Software Engineer Intern*

April - September 2020

Joined the Endpoint Agent team and worked with the backend team on a new product. Experienced professional software development and full DevOps cycle.

### Cisco ThousandEyes - *Software Engineer Intern*

July - September 2019

Worked for both the frontend and backend teams to build the webapp. Gained experience in using Spring Boot and Vue.

### Facebook Hack-a-Project - *Participant*

February - March 2019

A five week programme for developing coding skills and experiencing the full development cycle with the support of a Facebook mentor.

## SOFTWARE ENGINEERING PROJECTS

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### Tamagucci – Python, Javascript

IC Hack 20 group project, Feb 2020

A gamified pet drone that listens to the user's commands and plays with you. Won the 'Best Entertainment Hack' prize in IC Hack 20. Links: [Project DevPost](#), [GitHub](#), [YouTube demo](#)

### Drone Playground – Javascript, Python

3rd year group project, Oct - Dec 2019

A teaching tool targeting primary school students to teach them programming, by letting them write code to control a drone and complete different tasks. The Department of Computing's outreach team at Imperial has used it in a primary school and has great feedback from the students. Links: [GitHub](#), [YouTube demo](#)

### TEA - Tutorial Educational Aid – JavaScript, Python

2nd year group project, May - Jun 2019

A web application that helps with organising lab sessions. Students can send help requests with their location and they are displayed in a queue for the helpers to locate the students quickly.

### Guitar Amateur – C

1st year group project, May - Jun 2018

A rhythm game written in C, inspired by Guitar Hero series, that users hold the right keys and 'strum' as notes move down along with the music playing. Reversed engineered the Guitar Hero songs files to support the playing experience of all songs from the original game.

## AWARDS

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### Certificate of Distinction in Euclid Mathematics Competition

2016