

# 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  
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

**ThousandEyes** - *Software Engineer Intern* April - September 2020  
Joined Endpoint Agent team and worked with the backend team on a new product of the company. Experienced professional software development and full DevOps cycle.

**ThousandEyes** - *Software Engineer Intern* July - September 2019  
Joined ThousandEyes' Endpoint Agent team. Worked for both frontend and backend team to help building the webapp. Gained experience in developing in 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. As part of it, I worked in a team of 4 and built a native mobile app that brings people together by helping to find and organise football games.

## SOFTWARE ENGINEERING PROJECTS

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**Tamagucci** – Python, Javascript IC Hack 20 group project, Feb 2020  
A gamified pet drone that listens to 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 teach 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

## SKILLS

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**Programming:** Python, Pytorch, Answer Set Programming, Prolog, C, Kotlin, Haskell  
**Language:** English (fluent) and Chinese (native)