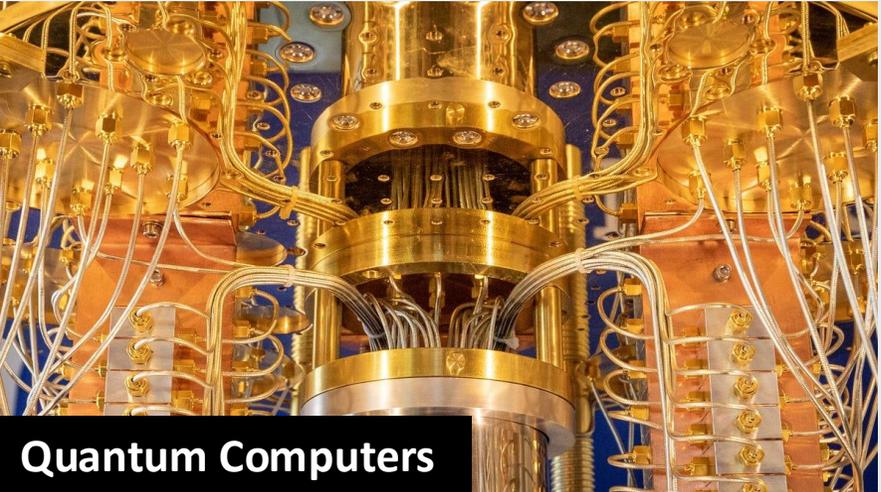
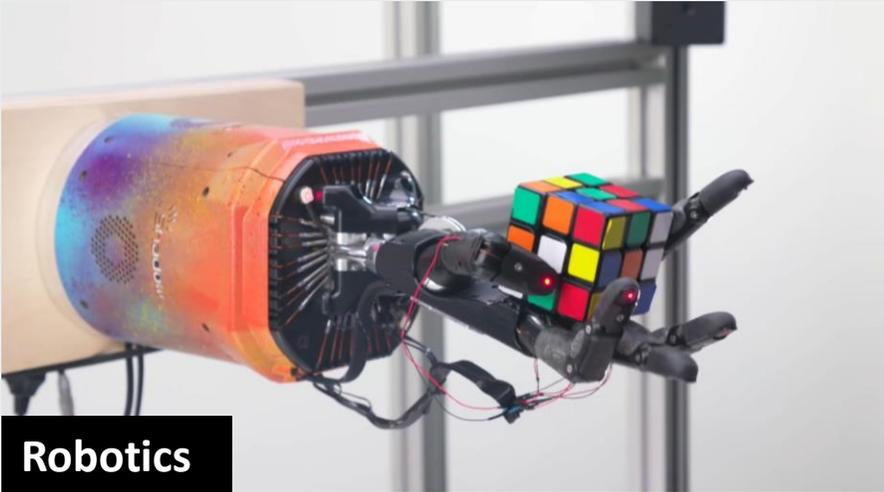
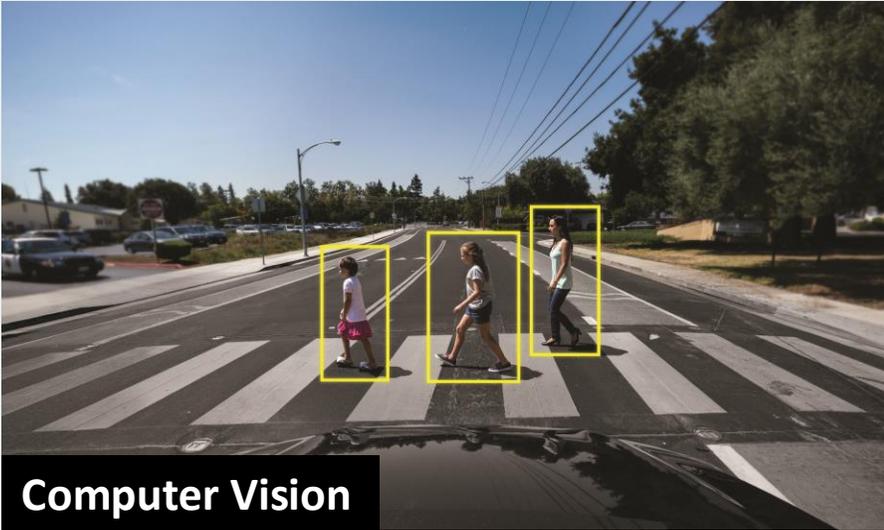


# Introduction to the Department of Informatics

Presented by  
**Dr Michael Cook**



# The Future of Technology



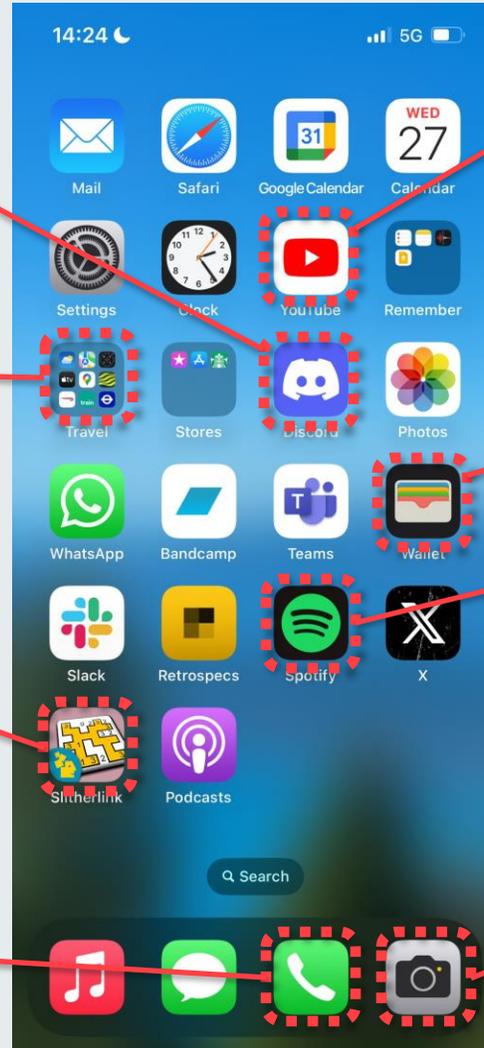
# Computer Science and AI has many different angles to it...

Interface design and human-computer interaction

Pathing, planning and optimisation

Procedural generation and automatic puzzle solving

Signal processing, information theory, hardware design



Compression algorithms and networking theory

Security, safety and verification

Recommendation systems and user modelling

Computer vision, graphics and image processing

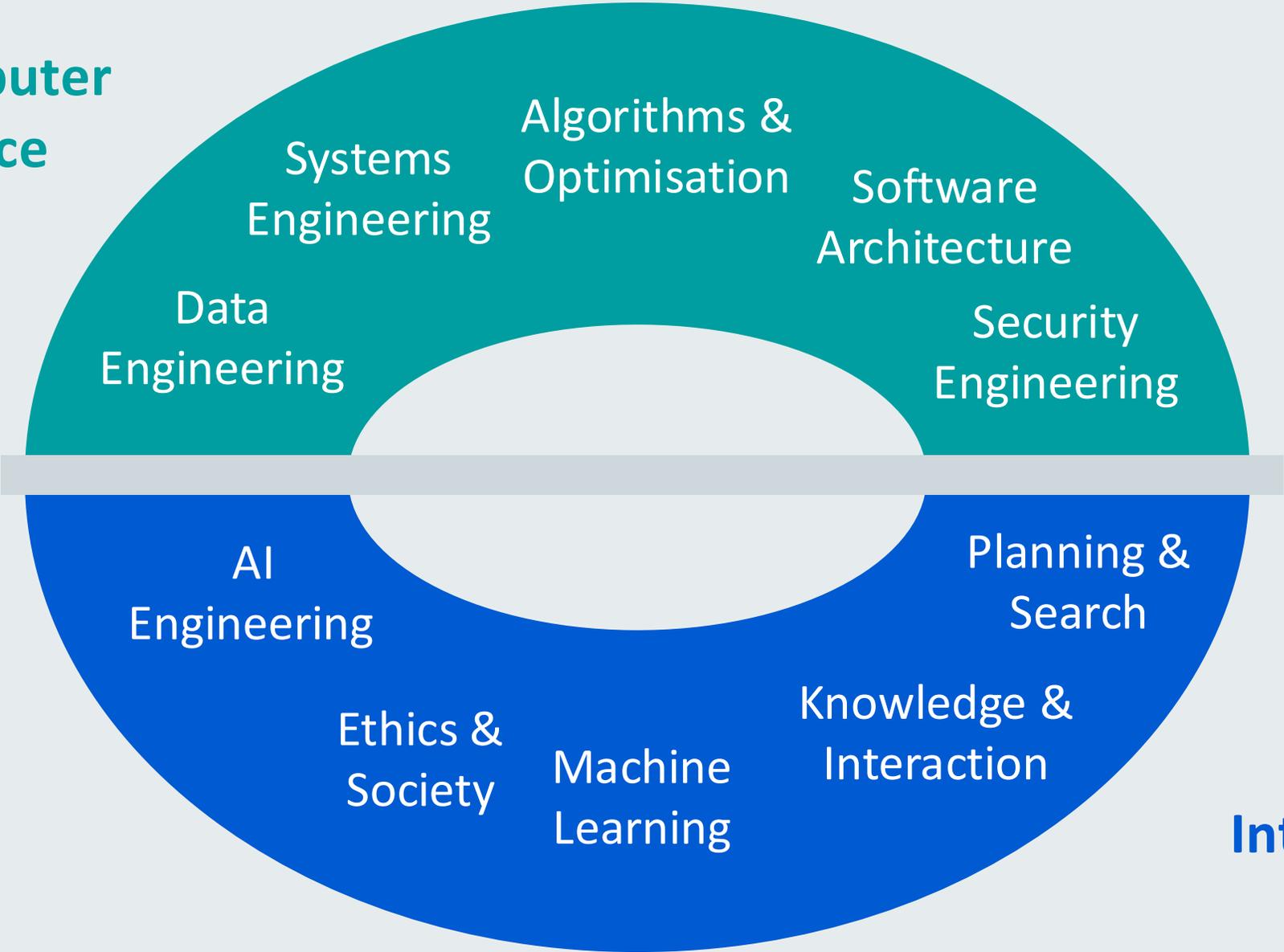
# ...and touches our lives in many different ways!



# The two sides of Computing at King's College London

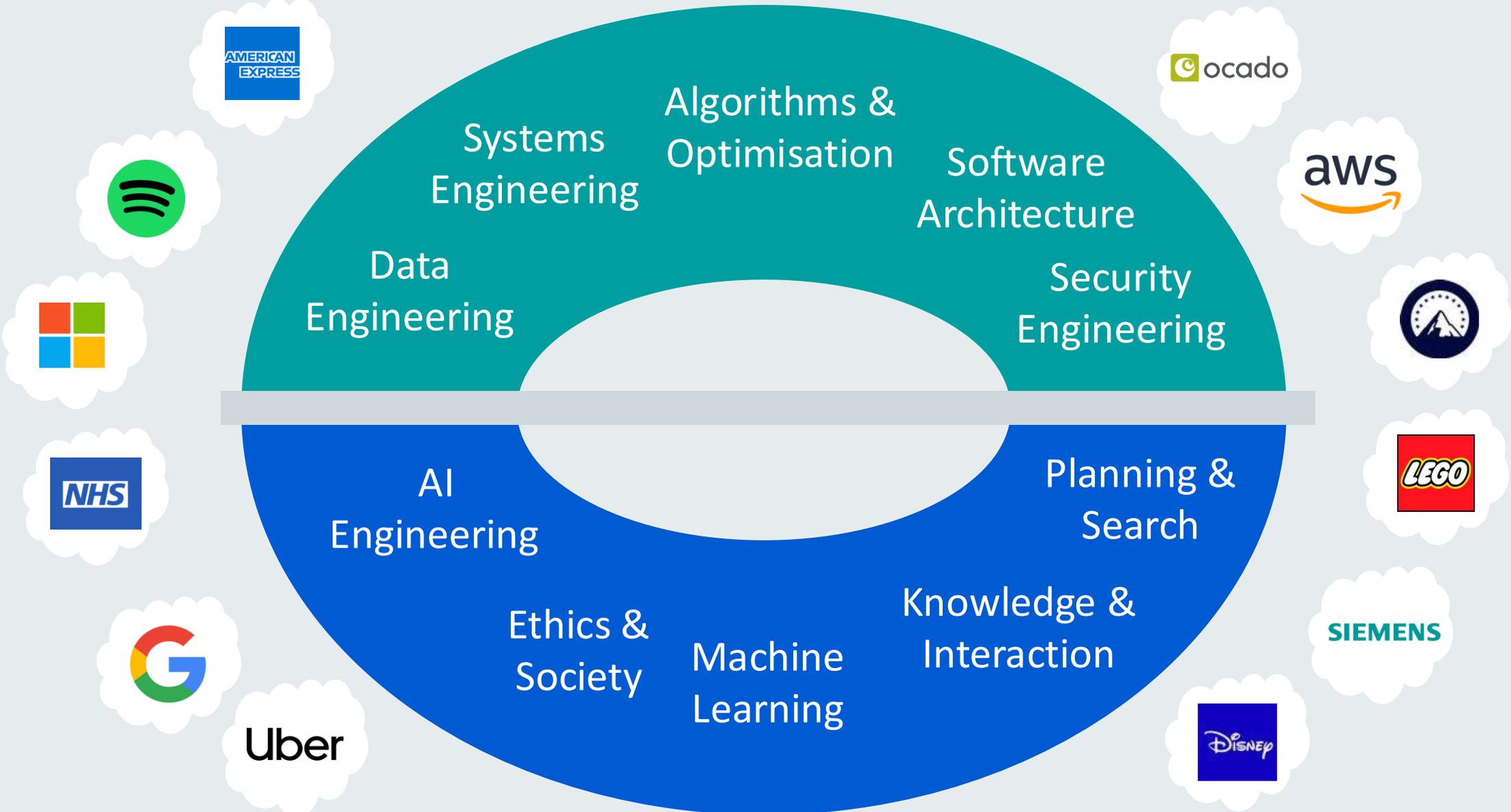
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**Computer  
Science**



**Artificial  
Intelligence**

# The two sides of Computing at King's College London



# Computer Science or Artificial Intelligence?

---

✓ Both programmes have overlap and learn about topics from each other's areas.

✓ Both courses train world-class engineers with practical skills and cutting-edge knowledge of their field

✓ Both cover the fundamentals of computing and teach reusable, transferable skills that apply to a wide range of jobs.

✓ Both courses are accredited by the BCS, valued and recognised by employers around the world.

# Typical Job Profiles in Computer Science

---

**Software Integration  
Engineer**

**Security Engineer**

**Full-stack developer**

**Mobile developer**

**DevOps Engineer**

**Front-end / Back-end  
Developer**

**Computer Science  
Teacher**

**Systems Analyst**

**Research Scientist**

# Typical Job Profiles in Artificial Intelligence

---

**Data Scientist**

**Logistics Engineer**

**Negotiation Engineer**

**Knowledge Graph  
Engineer**

**Algorithmic Impact &  
Responsibility Scientist**

**Robotics Engineer**

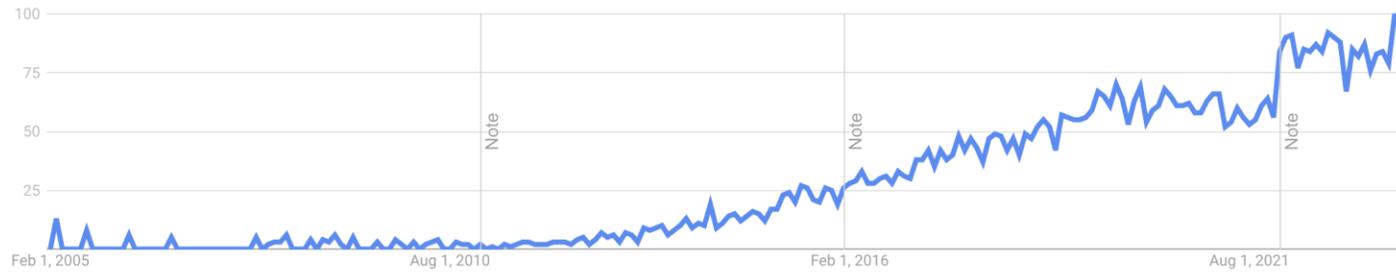
**Policy Advisor**

**Business Intelligence  
Engineer**

**Systems Architect**

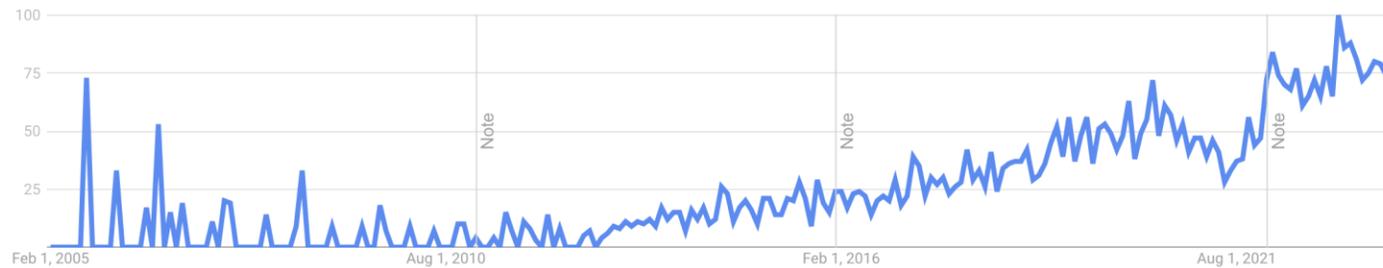
# What's Coming Next?

Interest over time ?



**Data Scientist**

Interest over time ?



**Python  
Developer**

# Looking To The Future



## Algorithms and Data Analysis

The research scope of the Algorithms and Data Analysis (ADA) group ranges from theoretical...



## Cybersecurity

The Cybersecurity (CYS) group studies design, modelling, analysis, verification and testing of...



## Distributed Artificial Intelligence

The Distributed Artificial Intelligence group explores the use of AI in social and economic contexts...



## Human Centred Computing Research

The Human Centred Computing (HCC) group is concerned with the design, development and evaluation of...



## Reasoning and Planning

The Reasoning and Planning (RAP) group focusses on the fundamental Artificial Intelligence challenge...



## Software Systems

The Software Systems (SSY) group studies design, modelling and engineering of software systems,...

# **Computer Science and Artificial Intelligence at King's College London**

# World-leading education and research quality



Ranked 40<sup>th</sup> in the world, 8<sup>th</sup> in the UK (QS World Rankings)



6<sup>th</sup> in the UK overall



5<sup>th</sup> in the UK for Social Impact (Times Higher Ed.)



7<sup>th</sup> for graduate prospects



Ranked 17<sup>th</sup> for Computer Science (Guardian 2024)



Teaching Excellence Framework



3<sup>rd</sup> in the UK for multi-faculty Research Impact

Top 20% of universities for knowledge exchange & impact (KEF 2023)

# BSc with Year in Industry



More info at:

<https://www.kcl.ac.uk/careers/get-experience/placements>



# BSc with Year Abroad



香港大學  
THE UNIVERSITY OF HONG KONG



MONASH  
University



NUS  
National University  
of Singapore

Berkeley  
UNIVERSITY OF CALIFORNIA



ÉCOLE  
POLYTECHNIQUE

UCLA



UNIVERSITY OF  
TORONTO



POLITÉCNICA

UNIVERSIDAD  
POLITÉCNICA  
DE MADRID

More info at:

<https://www.kcl.ac.uk/study-legacy/abroad/discover/destinations/partners-by-department>



# What Does a Fourth Year Offer?

## Masters-Level Skills

A fourth year of study allows you to go deeper into the topics you're passionate about, and gain a new set of skills that employers value highly.

## Advanced Seminars and Research

Fourth-year content is closer to the **cutting edge** of research, taught by leaders in their fields, giving a unique perspective on important topics in computer science and artificial intelligence.

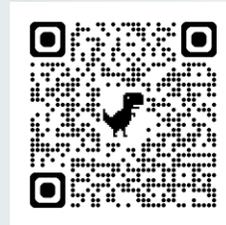
## Group Projects

Create a portfolio piece, practice working on a team of engineers, and develop BCS-recognised skills to prepare you for industry. Past fourth-year group projects have also led to startups and commercial products.



# New for 2025: Artificial Intelligence & Philosophy BSc

- Our new **joint-honours degree** combines AI with philosophy's study of the big questions.
- You'll study an **equal balance of AI and philosophy to develop a broad, global mindset.**
- This degree will equip you with the **technical and critical skills that open doors** to careers in tech, government, business, journalism, research and more.
- You'll be able to choose from a wide-range of modules, **tailoring your degree to your interests.**
- You'll be **taught by the best** - Philosophy and Computer Science departments are both ranked in the top 6 in the UK (QS 2024).
- You can also choose to **study abroad** for a year as part of this degree.
- Course webpage and applications will be open in September, scan the QR code to register your interest and receive the latest news about this course.



# Graduation and Careers



7<sup>th</sup> for graduate prospects



3<sup>rd</sup> for graduate careers (CS)



6<sup>th</sup> for employability



**King's Careers and Employability team provide a range of support to students, including:**

- *Career coaching and planning sessions*
- *Application feedback and practice interviews*
- *Drop-in advice sessions*
- *Industrial placement support*

# Careers in Informatics

## Job Titles

- Analyst
- Global Markets Analyst
- Managing Director
- Vice President
- Systems Analyst
- Credit Analyst
- Project Services Manager
- Software Developer
- Vice President
- Software Engineer
- Data Management Lead
- Data Governance Engagement Director
- Development Operations Manager
- Technical Architect
- ICT Engineer
- Head of IT

## Industries

- Banking & Finance
- Computing & IT
- Engineering
- Education & Research
- Information Technology Services
- Consultancy
- Management Consulting
- Entertainment
- Media
- Marketing & Advertising
- Telecommunications
- Health



# Launching your startup



**King's Entrepreneurship Institute**

# Finding real-world impact



Informatics students spent seven months of their final year developing innovative tech solutions to challenges faced by public sector bodies, as part of a scheme delivered with Amazon Web Services (AWS).

The full story of our students' Impact Accelerator initiative



## Solving real problems across London

# Undergraduate Research Opportunities: KURF

**Contributors**  
(By name order)



Dr Alfie Abdul Rahman



Professor Cristina Dondi



Dengyi Yan



Meilai Ji



Xiangyi Liu



Yiyen Xing

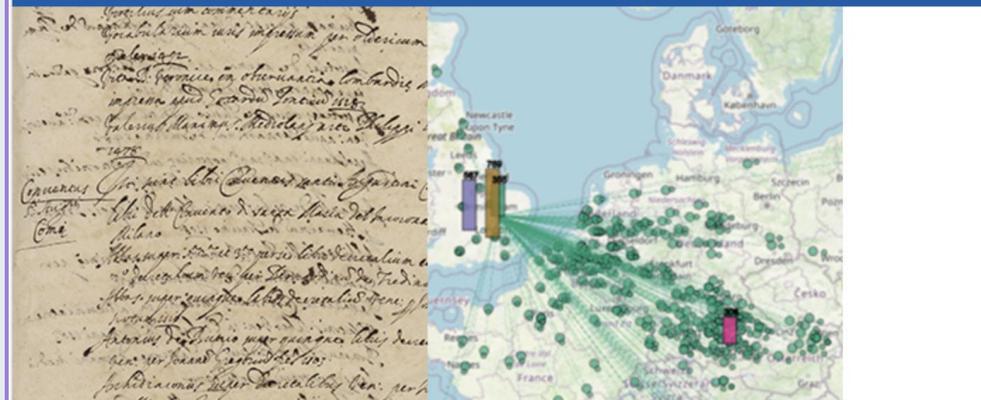
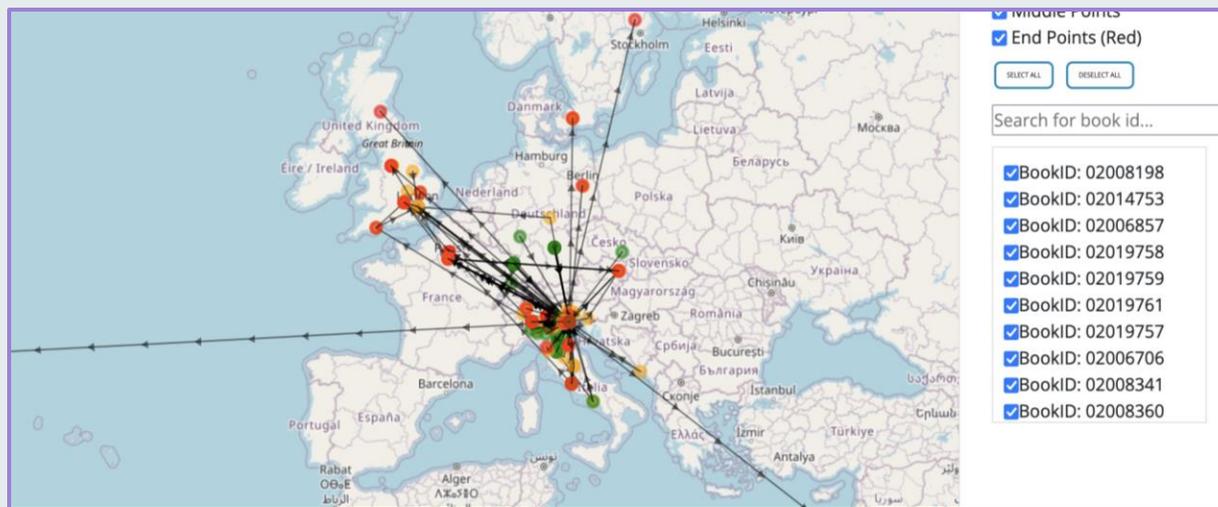
The project is a collaboration between





King's College London      Consortium of European Research Libraries (CERL)      University of Oxford

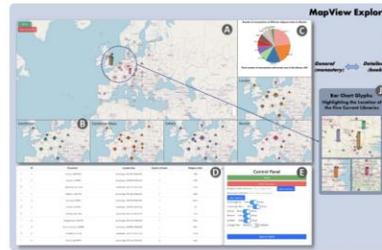
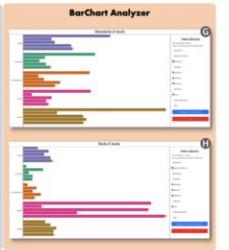
## Sandars Lecture 1

## Unveiling the Dispersal of Historical Books from Religious Orders

Y. Xing<sup>1</sup>, D. Yan<sup>1</sup>, C. Dondi<sup>2</sup>, R. Borgo<sup>1</sup>, and A. Abdul-Rahman<sup>1</sup>

<sup>1</sup>King's College London, United Kingdom    <sup>2</sup>University of Oxford, United Kingdom

**Figure 1:** Two interfaces are designed to visualize the dispersal of books using map-based layouts augmented with descriptive statistics. The *MapView Explorer* offers a two-tier view of the monastery or book distribution on the main map (A) and five synchronized mini-maps (B-E).

## King's Undergraduate Research Fellowships

# Undergraduate Research Opportunities: Robocup



More on KCL's  
RoboCup@Home  
team

Undergraduate research opportunities gets students closer to real research, like our Robocup@Home competition team!

KCL Robotics on the BBC  
One Show recently:



Zoe Evans  
King's College London

**What does a typical week look like?**

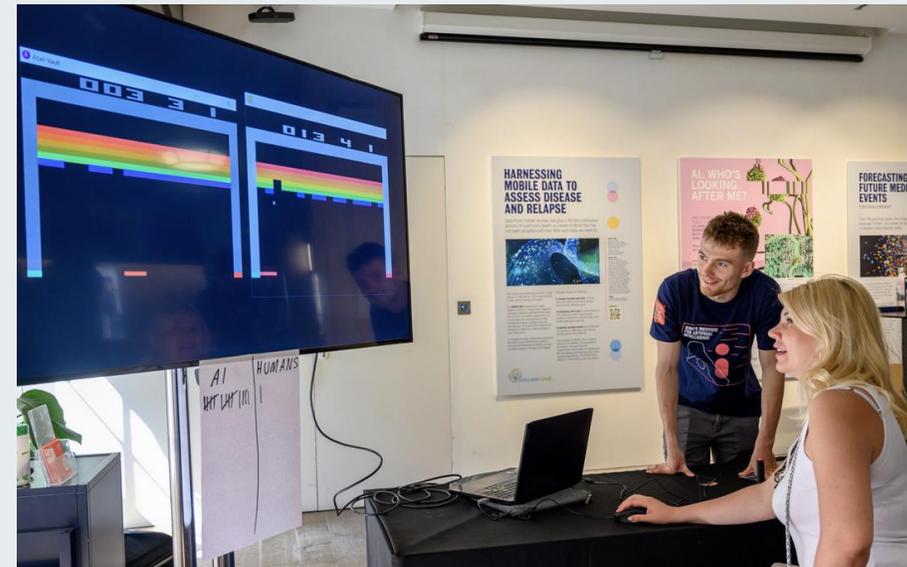
# Where you will spend your time...



# How you will spend your time...

Module 1	Module 2	Module 3	Module 4
Lectures / Large Group Tutorials 2 hours			
Software Labs 2 hours	Software Labs 2 hours	Software Labs 2 hours	Software Labs 2 hours
Seminars / Small Group Tutorials 1 hour			
Independent Self-Study 5-6 hours	Independent Self-Study 5-6 hours	Independent Self-Study 5-6 hours	Independent Self-Study 5-6 hours
Total 40 hours / week			

# Life at King's is vibrant and extends beyond the lecture hall!



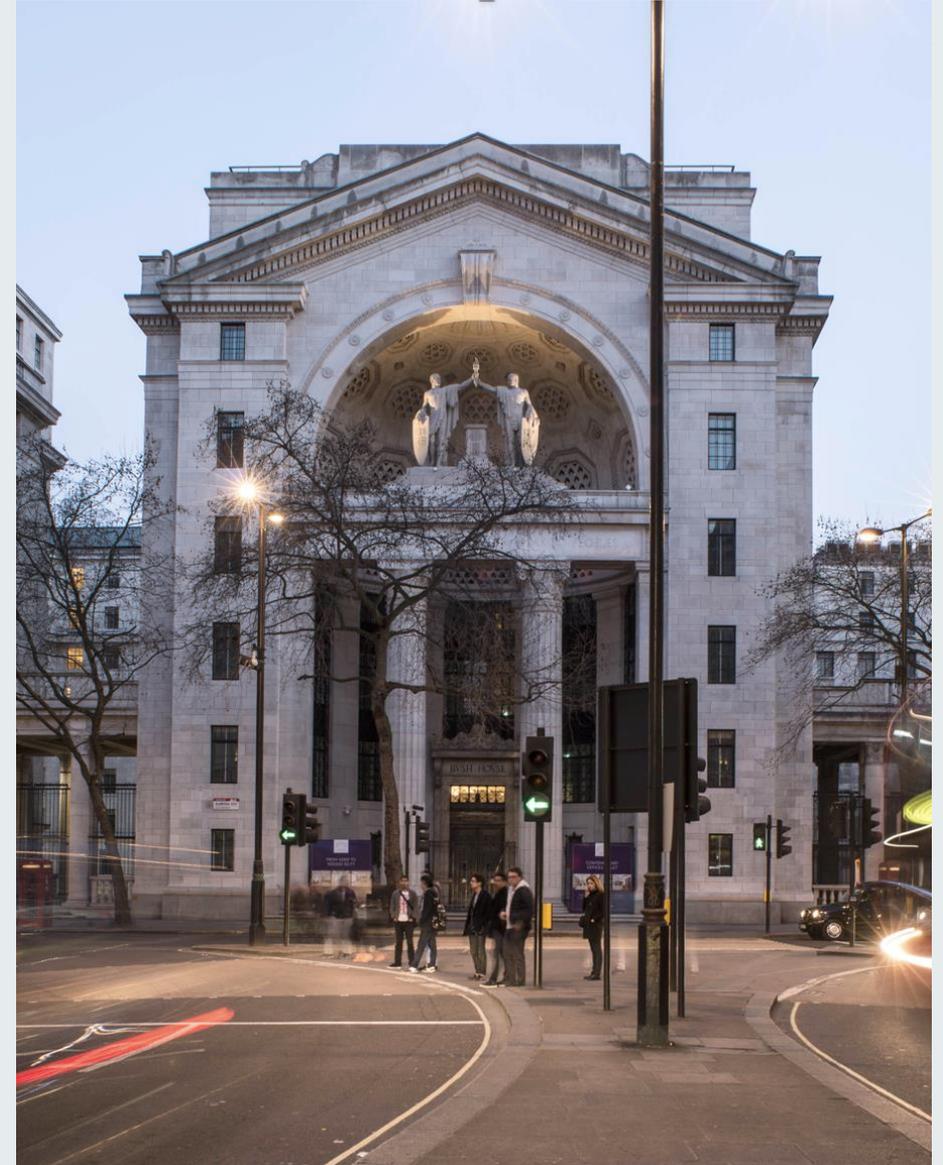
**Our values and ethos**

# Equality, diversity and inclusion @ King's Informatics

✓ Provide an inclusive working, learning and research environment for all staff and students

✓ Ensure that no staff or student will be disadvantaged because of any protected characteristics

✓ Strive for diversity of staff and students along all dimensions



# Women in Science @ KCL Informatics



31  
May

**[WiS Seminar Series]: Exam season finale - time to celebrate**

31 May 2023, 16:00 to 19:00

Exam Season Finale: Time to Celebrate



3  
Apr

**[WiS Seminar Series]: The science of knowledge equity - research at Wikimedia**

03 April 2023, 16:00 to 17:00

The Science of Knowledge Equity - Research at Wikimedia



29  
Mar

**[WiS]: King's Women in Informatics 2023 Conference**

29 March 2023, 16:00 to 19:00

King's Women in Informatics 2023 Conference



## PhD students present at ACM Women in Computing in Europe

Women PhD students from the Department of Informatics' research groups were invited to attend the 8th ACM Celebration of Women in Computing in Europe

Last updated on Mar 2, 2022



8th ACM Celebration of Women in Computing  
**womenCOURAGE**  
22-24 September 2021  
Virtual - Europe and Beyond



**Athena  
SWAN**  
Bronze Award

More info at:

<https://www.kcl.ac.uk/informatics/about/diversity-inclusion>



# Equality, diversity and inclusion @ King's



Welcome to Disability Support at King's College London



## Supporting wellbeing and inclusive learning



### Social mobility at King's

Empowering underrepresented students in higher education



### The What Works Department

Research and evaluation to help enhance social mobility and student success



### Careers+

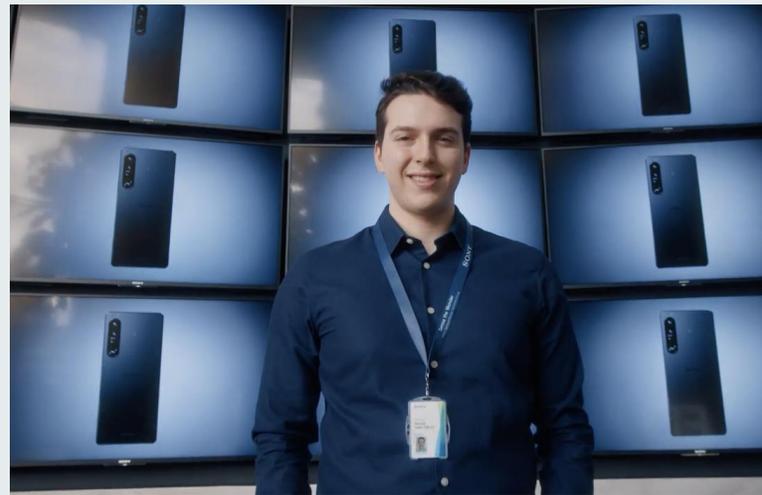
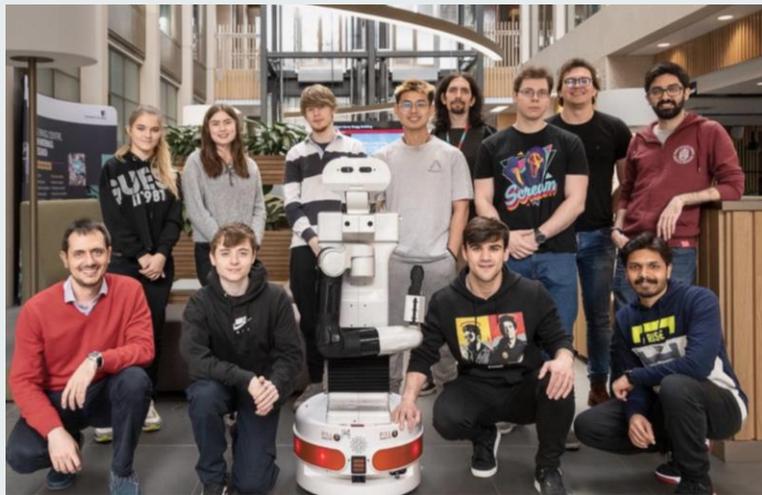
Specialist support for students from underrepresented backgrounds



More info at:  
<https://www.kcl.ac.uk/informatics/about/diversity-inclusion>



# How will you make a difference?



# Thank you

## For more information contact

Dr Christian Urban

Undergraduate Admissions Tutor

[christian.urban@kcl.ac.uk](mailto:christian.urban@kcl.ac.uk)

Chat to current students:

[www.kcl.ac.uk/unibuddy](http://www.kcl.ac.uk/unibuddy)

[www.kcl.ac.uk/informatics](http://www.kcl.ac.uk/informatics)

## Your next steps today:

- Visit us in the NMES hub in Bush House, Level 8 and chat to current students and staff

*Dr Michael Cook*

*Senior Lecturer*

*[mike.cook@kcl.ac.uk](mailto:mike.cook@kcl.ac.uk)*