

# Xia Hua

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## Education

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- University of Cambridge** 2019 – 2023
- PhD in Engineering (Optical Pre-classifier for Deep Learning)
  - Modules include Probabilistic Machine Learning, Deep Learning and Structured Data
- University of Cambridge** 2018 – 2019
- Master of Research (MRes) in Integrated Photonic and Electronic Systems
  - Modules include Computer Vision, Optical Fibre Communication, Management of Technology and etc.
- University of Warwick** 2015 – 2018
- Bachelor of Engineering (BEng) in Engineering (General), First Class Honours
  - Specialised in Electronic Engineering in third year
- Abbey College Cambridge (High School)** 2013 – 2015
- A-Level Mathematics, Further Mathematics and Physics (A\*A\*A), AS Economics (A)

## Work Experience

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- VividQ** **Cambridge, UK**  
*R&D Software Engineer* *Jun. 2019 – Aug. 2019*
- Implement several algorithms in MATLAB for Computer Generated Holography
  - Investigate the layer based algorithm to achieve full parallax for 3D holographic display
  - Retrieve depth layer and amplitude information from Unity through Visual Studio (C#)
- Kantar Media CIC** **Shanghai, China**  
*Business Data Analyst Internship* *Jul. 2018 – Sep. 2018*
- Social media data mining and analysis through Python, Excel and etc.
  - Generate daily, semi-month, month and other reports for clients
  - Clients include Huawei, Qualcomm, Coca-Cola and etc.
- Warwick Manufacturing Group (WMG)** **Coventry, UK**  
*Summer Research Internship* *Jul. 2017 – Sep. 2017*
- Supervisor: Professor Richard McMahon
  - Research on battery and converter sizing and battery management algorithm by using MATLAB and Simulink
  - Built a Simulink model, analysed data from house power monitor hub.
- TATA Consultancy Services** **Shanghai, China**  
*Assistant System Administrator Internship* *Jul. 2016 – Aug. 2016*
- Maintained operating systems such as updating software and fixing users' issues by remote control through client-server
  - Assembled and updated desktops for the company's clients (Nelson and JP Morgan)
  - Assisted the Information System team classify users' network switch port
- China CITIC Bank** **Yangzhou, China**  
*Summer Internship* *Jun. 2014 – Jul. 2014*
- Worked under Department of International Business
  - Learned how systems such as Swift, Chips work in BIS (bank for international settlements)

## Skills

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- Programming Language**
- Python, Tensorflow Framework, MATLAB, L<sup>A</sup>T<sub>E</sub>X, Verilog, C++

## Professional Software

- Silvaco TCAD Atlas, Simulink, Tanner Tools, Origin, SolidWorks

## Honours and Awards

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|   |      |
|---|------|
| University of Warwick URSS Award (£1600)                                | 2017 |
| Distinction (Ranked top 200 in the UK) in British Mathematical Olympiad | 2015 |
| Gold Certificate in Senior Mathematics Challenge                        | 2014 |

## Projects

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|   |                       |
|---|-----------------------|
| Comparison between Analogue and Digital Radio over Fibre Systems      | Nov. 2018 – May. 2019 |
| Assessment of Properties of Mid-Infrared LEDs in a Gas Sensing System | Oct. 2017 – Mar. 2018 |
| FPGA VGA Game Desgin  | Oct. 2017 – Dec. 2017 |
| Ultrasonic Sensor Prototype Device                                    | Nov. 2016 – Jan. 2017 |
| Intelligent Robot Vehicles  | Jan. 2016 – Apr. 2016 |

## Conferences

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|---|---------------------------|
| International Conference of Undergraduate Research (ICUR)   | Coventry, UK<br>Sep. 2018 |
| Mid-Infrared LEDs Gas Sensors - A more efficient gas detection approach for industrial environmental monitoring |                           |

## Position of Responsibility

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|---|-----------------------|
| Warwick Chinese Drama Society   | Coventry, UK          |
| Sound Director  | Oct. 2016 – Feb. 2017 |
| <ul style="list-style-type: none"><li>○ Head of sound effects department, responsible for planning the sound effects and background music</li><li>○ Performed for two dramas shown at Warwick Arts Centre</li></ul> |                       |

## Interests

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Marathon, hiking and classical Music