

Xia Hua

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in Xia Hua • 🌐 [ravelhua](https://github.com/ravelhua)

Education

University of Cambridge

2019 – 2022

- PhD in Engineering (Optical Pre-classifier for Deep Learning)
- Centre for Molecular Materials, Photonics and Electronics
- 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

VividQ

Cambridge, UK

R&D Software Engineer

Jun. 2019 – Aug. 2019

- Implement several algorithms in MATLAB for 2D and 3D Computer Generated Holograms
- 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

Programming Language

- Python, MATLAB, SQL, TensorFlow Framework, \LaTeX , Verilog, C++

Professional Software

- Microsoft Office, Silvaco TCAD Atlas, Simulink, Tanner Tools, Keysight ADS, Origin, SolidWorks

Honours and Awards

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
Gold Certificate in Senior Mathematics Challenge	2013

Projects

Layer Based True Depth Perception Algorithm for 3D CGH Display	Jun. 2019 – Aug. 2019
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 Design	Oct. 2017 – Dec. 2017
Ultrasonic Sensor Prototype Device	Nov. 2016 – Jan. 2017
Intelligent Robot Vehicles	Jan. 2016 – Apr. 2016

Conferences

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

Position of Responsibility

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

Interests

Marathon, snowboarding, hiking and classical music