

Ziheng ZHANG

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EDUCATION

Darwin College, University of Cambridge | Cambridge, United Kingdom

Oct 2018 – Present

- *MPhil in Advanced Computer Science*
- Dissertation: Automatic Recognition of Bipolar Disorder from Multimodal Data
- Key courses: Machine Learning, Natural Language Processing, Multicore Semantics and Programming, Advanced Graphics and Image Processing, Advanced Topics in Machine Learning and Natural Language Processing

University of Liverpool | Liverpool, United Kingdom

Sept 2016 – June 2018

Xi'an Jiaotong Liverpool University (XJTLU) | Suzhou, China

Sept 2014 – June 2016

- *BEng in Computer Science & Electronic Engineering, degree: first class (80%, top 1 in program)*
- Key courses: Software Engineering (86%), Application Development with C++ (84%), Computational Game Theory (79%), Operating System (78%), Database Development (82%), Control Theory (85%), Digital Electronics and Microprocessor System (91%), Engineering Mathematics (88%), Calculus (81%), Linear Algebra (84%)
- Xi'an Jiaotong Liverpool University Academic scholarship (top 10% of the department)

TECHNICAL SKILLS

- **Programming Languages:** experienced in C++, Python; familiar with Java, MATLAB, SQL, HTML, JavaScript
- **Libraries & Packages:** OpenCV, Dlib, PCL, Kinect SDK, Numpy, Pandas, Matplotlib
- **Programming Applications:** Visual Studio, Xcode, Anaconda, IntelliJ IDEA, NetBeans, VS Code
- **Production Applications:** Adobe Photoshop, Adobe InDesign, Adobe Premiere, Final Cut Pro

PROJECT EXPERIENCE

Direct Eye Video Conferencing | University of Liverpool | Independent Researcher

Sept 2017 – Mar 2018

Advisor: Professor Jeremy Smith, professor at Department of Electrical Engineering & Electronics

- Researched mathematical models for camera calibration, stereo vision, disparity map, and view synthesis
- Used machine learning techniques to recognize human face and detect all 68 landmarks in real time
- Integrated a software to generate a synthesised view to enable people to perceive eye-contact

Pose & Location Estimation using Kinect | University of Liverpool | Project Assistant

July 2017 – Sept 2017

Advisor: Dr Vitaliy Kurlin, associate professor at Department of Computer Science

- Obtained and visualized real-time point cloud, both monochromatic and self-coloured from a Kinect sensor
- Transformed Industry Foundation Classes (IFC) files to OBJ files without losing geometric precision
- Researched and applied FPFH algorithm and RANSAC algorithm to estimate pose and location of a point cloud

Voice Recognition Calculator | University of Liverpool | Project Leader

Feb 2017 – May 2017

Advisor: Dr Kirsty McKay, lecturer at Department of Electrical Engineering & Electronics

- Researched and applied MFCC-DTW voice recognition algorithm in MATLAB with pre-recorded audio datasets
- Integrated circuit, Arduino UNO, and LED display to accomplish calculation based on microphone input
- Directed a team of five members, coordinated with tutor, implemented critical algorithms, and designed the GUI

WORK EXPERIENCE

BOSCH Automotive Products (Suzhou) Co., Ltd. | Department Assistant | Suzhou

Mar 2016 – Aug 2016

- Assisted manager to coordinate the department and to prepare training material with skills in Photoshop and PowerPoint
- Participated in a demonstration project of an intelligent system for human-machine collaboration, APAS Assistant

EXTRA CURRICULAR ACTIVITIES & LEADERSHIP

TEDxYouth@Suzhou | Co-Curator & Team-Management

July 2015 – Mar 2016

- Organized and coordinated two salons (170 audience) and one annual conference (500 audience) with a team of youth

Student Career Development Association, XJTLU | President of IT branch

Sept 2014 – Mar 2016

- Arranged association's regular activities and specialised activities, such as program-choice lectures and 3D-printing month
- Established contact with practitioners inside Information Technology field and fostered an early sense of career

AWARDS & OTHERS

- **Awards:** XJTLU excellent student cadre and XJTLU outstanding student
- **Language:** Chinese (Native); English (Professional)
- **Standardised Examinations:** GRE Q170 AWA4.0; TOEFL 106 (W29); IELTS 7 (S7.5)
- **Certificates:** Python for Everybody Specialization (99%), Algorithm Course (97%), Machine Learning Course (97%)