# ZIAN HUANG

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## EDUCATION

**University of Cambridge** *Sep 2022 - Sep 2023*
*MPhil in Scientific Computing*
- Grade: distinction

**University College London** *Sep 2019 - Jun 2022*
*Physics BSc*
- Grade: first-class honours

## WORK EXPERIENCE

**UCL Department of Physics and Astronomy** *May 2022 - Aug 2022*
*Full Time Summer Research Intern*
- TensorFlow machine learning framework
- CNN trained on simulated signals of electron pair production in the ATLAS experiment

**UCL Information Services Division** *Oct 2021 - Jun 2022*
*Part Time IT Training Assistant*
- Assisted in UCL-managed software training courses for staff and students
- Teaching experience in MATLAB, Python, and Stata

## SKILLS

**Languages**
- *Chinese*: native speaker, fluent in both Mandarin and Cantonese
- *English*: full professional proficiency, IELTS 8.0

**Computational Physics**
- *Coding*: C++ and Python
- *Parallel programming*: OpenMP and MPI
- *General computing*: Linux, Git, build tools

**Web Development**
- *Framework*: Next.js, React
- *Graphic design*: Adobe Illustrator, Adobe Photoshop

## CFD EXPERIENCE

**Numerical Methods**
- MUSCL scheme and approximate Riemann solvers for compressible flow
- Projection method and staggered grids for incompressible flow

**Multiphysics Techniques**
- Riemann ghost fluid method and level set method for sharp interface
- Diffuse interface and volume of fluid method
- cut-cell approach and embedded boundary

**Software Frameworks and Visualisation Tools**
- AMReX, a framework of block-structured adaptive mesh refinement
- VisIt, gnuplot and Matplotlib