

William Jennings

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Research Experience

University College London, Astrophysics PhD, 2014 - Present

- Design numerical simulations and theoretical models of radiation in early Universe
- Implement machine learning and surrogate models to mimic and accelerate simulations
- Use Bayesian inference on hundred-terabyte datasets to evaluate most likely theories
- Optimised statistical analysis code; presented at international conference in Greece to two hundred research scientists — my code is four times faster than previous best method
- High-performance computing, including multi-threaded design, PBS and bash scripting
- Organise and chair weekly journal club for twenty-five students and professors in Cosmology group: preparing meeting agenda, moderating questions and disagreements
- Programming languages: Python (including scikit-learn, pandas, matplotlib, and other data science modules), C/C++, Objective-C, Fortran, MATLAB

Education

University of Cambridge, BA 2013 & M.Sci 2014

- **M.Sci Experimental and Theoretical Physics** (2013-2014)
 - First grade in Master's project computational model of disease epidemics
 - 2.1 grade overall
- **BA Experimental and Theoretical Physics** (2010-2013)
 - Highest mark in entire year for any experimental module (90%)
 - High First grade in computational project (83%)
 - High 2.1 overall in Part II exams (69%)

Eton College, 2005 - 2010

- Oppidan Scholar (awarded to top 25 students)
- Researched and wrote 42-page independent research project on superconductors—won second place in prestigious Huxley Prize, interviewed and judged by Prof. Brian Cox

Employment

Private Tutor, January 2016 - Present

- Tutor five A-level students for Maths, Further Maths, and Physics
- Tutor three GCSE students for Maths, Three Sciences, Latin, and Greek

Freelance App Developer, November 2015 - January 2016

- Designed, coded, and published proprietary Instagram-style iOS app for an innovation-orientated consultancy company, using Google Firebase for live database storage

MTT Innovation, summer R&D internship, June - August 2013

- Coded optical-systems models using MATLAB, interacting with small team of scientists to build a new type of projector technology
- Performed precise alignment, calibration and measurements on optical set-ups

Neptune Investment Management, summer analyst, June - August 2012

- Wrote and presented detailed reports to Investment Team, including a summary of 4G mobile internet systems and a review of carbon-fibre manufacture methods
- Coded programs to filter and display bond-market data

Other Achievements & Interests

- Keen traveller: Bali, Argentina, Morocco, Mozambique, South Africa, Turkey, Bermuda, Greek Islands, Malaysia, Japan 10-day solo walking tour along Kumano Kodo trail
- Musician, guitar and jazz piano; performed in the band Denim on the main stage at St John's College's May Ball 2012