ALEX A. LASCELLES

Boston, USA alexlascelles LascellesAlex
alexlascelles95@gmail.com +1 857 6540975 www.alexlascelles.com

EDUCATION

Goldsmiths, University of London 2017 - 2018
*MSc Music, Mind and Brain (**First-Class Honors**) course link*

- Program combining music psychology and neuroscience, focusing on biological & cognitive aspects of musical behaviour.
- Core courses include: Foundations of Neuroscience, Cognitive Neuroscience of Music, Statistics, Experimental Design.
- Audited courses: Machine Learning, Advanced Quantitative Methods.

University of Southampton & Harvard University 2013 - 2017
*MPhys Astrophysics with a Year Abroad (**First-Class Honors**) course link*

- Achieved highest grades of any Master of Physics degree. Master's year spent conducting research at Harvard University.
- Core courses include: Calculus, Mechanics, Programming, Quantum Physics, Cosmology, Statistics, Electronics.
- Audited courses: Neurobiology of Perception and Decision Making, and Sleep and Circadian Rhythms.

The Thomas Hardye School 2011 - 2013

- **A Level**: Physics (A), Biology (A), and Math (A). **GCSE**: 9 A* and 2 A including Math, English, and Sciences.

PROFESSIONAL EXPERIENCE

Oliva Lab, MIT CSAIL Nov 2018 - Jan 2024
Technical Research Assistant *Dr. Aude Oliva*

Helping Dr. Oliva run her Computational Perception & Cognition Lab, with a focus on projects that combined human perception/cognition, computer vision (visual AI), and cognitive neuroscience to study how perception and cognition are realized in human and machine. Roles included:

- **Organizing large-scale public challenges & workshops** (e.g., GANocracy and The Algonauts Project).
- **Programming, running experiments, and data analysis & visualization** for neuroimaging (MEG/fMRI) and behavioural (human psychophysics & online) studies using **Python**, **MATLAB**, and **HTML/CSS/JS**.
- Investigating artificial neural networks for visual processing, and summarizing content into slide decks.
- **Managing lab equipment, finances, and computational resources**, as well as providing **web development for lab/project websites**, and scheduling meetings/events and other administrative duties.
- Involved in group projects with industry partners like Meta, to study action prediction for first-person videos, as well as many group projects within academia with researchers from MIT, other parts of the US and Canada, and Germany.

Goldsmiths, University of London Dec 2017 - Aug 2018
Master's Project *Prof. Joydeep Bhattacharya FRSA*

- Designing and conducting an EEG experiment to investigate the neural correlates of a crossmodal correspondence between pitch and visual motion, culminating in a **first-class thesis & poster presentation** available here.
- Skills involved include: experimental design and participant handling, EEG script preparation, EEG analysis, and programming in **MATLAB** and **R**.

Harvard-Smithsonian Center for Astrophysics Aug 2016 - May 2017
Master's Project *Dr. Cecilia Garraffo*

- Planned and conducted 3-D magnetohydrodynamic **simulations** using cluster computing, Linux, and visualization software to investigate orbital evolution in binary star systems. Resulting **thesis talk & paper** available here.
- Poster presentation at the 229th American Astronomical Society Meeting, the largest annual US astronomy conference.

University of Southampton Supernova Group Jun - Aug 2015 & 2016
Astrophysics Research *Prof. Mark Sullivan*

- **Summer 2015**: Designed a **Python** program which created models to analyze over 16,000 objects and successfully identified candidates for a new class of supernovae.
- **Summer 2016**: Analyzed data for over 10,000 objects using **Python** fitting techniques in order to successfully locate a number of superluminous supernovae.

Instituto de Astrofisica de Canarias and Teide Observatory Mar - Apr 2015
Week 1: Space Mission Design Project *Course for Top Performing Students*

· Responsible for the orbital mechanics and science objectives for an intensive collaborative project to design a gamma ray telescope, culminating in a pitch to mission executives from the **European Space Agency**.

Week 2: Observational Astronomy Experience

· Devised observing strategies and collected data for a range of celestial objects on several professional telescopes.
· Authored an **academic paper** and presented a poster to the University of Southampton Astronomy Department.

University of Southampton Jan - May 2016
Computing Projects *Dr. Marcus Newton*

1. Created a physical model with **Python** to study the structure of White Dwarfs.
2. Explored planet habitability by simulating thousands of orbits around a binary star system using **Python** and a Runge-Kutta approach to solving differential equations.

OTHER VALUABLE EXPERIENCE

Sofar Sounds Oct 2018 - Jan 2020
Sofar Ambassador

· Working as artist liaison and on social media for Sofar Boston, organizing live musical performances in intimate settings.

Mathnasium Oct - Dec 2018
Math Tutor

· Math instructor, teaching a variety of concepts from Algebra to Precalculus, to students Grades 5 through to college.

Brown University Jan 2017
Hack @ Brown

· Created an Internet of Things platform that allows hardware devices to be controlled by a simple web interface. Programmed a working prototype on a **Raspberry Pi** to present to companies including Microsoft and Google.

Oxfam Sep 2011 - Sep 2013
Bookstore Assistant

· 100 days volunteering at a charity bookstore. Responsible for selling to the public and handling incoming donations.

AWARDS

Most Outstanding Performance on Any Master of Physics Degree

· Received after achieving an overall degree result of 84.5%.

Best Project by a Year Abroad Finalist

· Received after achieving a master's thesis grade of 90%.

Invitation to Conduct Masters Research at Harvard University

· Received after consistently achieving the highest grades in the year.

Ogden Trust Undergraduate Science Scholarship Recipient

· Awarded a competitive scholarship on the basis of academic merit during secondary school education.

The Duke of Edinburgh Gold Award

· Received an award which required 18 months of volunteering, 12 months developing a skill (jazz piano), 6 months of a physical activity (badminton), a 3-day hiking expedition, and a week-long residential activity.

SKILLS & INTERESTS

Computing — Proficient: **Python**, **MATLAB**, **HTML/CSS/JS**, cluster computing, MS Office, and both **Windows** and **Linux** OS. Familiar: R, Bash, Django, Unity

Sport — **Captain** (2014-15) of the Men's Badminton 2nd Team, including 3 years of competitive university matches ⋆ Social Secretary (2015-16) of the **largest UoS sports society** (Recreational Badminton) ⋆ Ultimate Frisbee ⋆ Climbing.

Music & Art — Grade 8 jazz piano ⋆ **Founder & President** of the Goldsmiths Jazz Society (2017-18) ⋆ Piano tutoring (3 years) ⋆ University of Southampton Piano Society **Secretary** (2014-15) ⋆ Ultra-realistic drawing ⋆ 5-ball juggling.

Languages — English (native) ⋆ French (intermediate) ⋆ Indonesian (intermediate).