# SARAH BARRINGTON

PhD Candidate, BA, MA, MEng, MIMS
Website | Google Scholar | GitHub

## EDUCATION

**PhD Candidate, Computer Vision & Forensics, University of California, Berkeley** Aug 2023 onwards

- 2023 Berkeley Fellowship Awardee, supervised by Professor Hany Farid (School of Information and Electrical Engineering and Computer Science)

**Master of Information Management & Systems, University of California, Berkeley** Aug 2021 - May 2023

- US-UK Fulbright Scholar for Data & Analytics 2021-22, GPA 4.0.
- Coursework includes: INFO 290T Computer Vision, INFO 271B Quantitative Research Methods, INFO 251 Applied Machine Learning, INFO 206B Data Structures and Algorithms, COMPSCI 294 Decentralized Finance, INFO 290 Politics of Information, INFO 203 Social Issues of Information

**Master of Engineering, University of Cambridge** Oct 2015 - June 2016

- First Class Honors with Distinction (equivalent GPA 4.0), coursework included: IIA1 Materials into Products, IIA2 Operation and control of Production Machines and Systems, IIB1 Technological Aspects of Manufacturing

**Bachelor & Master of Arts, General Engineering, University of Cambridge** Oct 2012 - June 2015

- Upper Second Class Honors (equivalent GPA 3.5), coursework included: IA Electrical and Information Engineering, IB6 Information Engineering, IB7 Mathematical Methods, IB5 Electrical Engineering

## PUBLICATIONS & RECENT MEDIA

- S. Barrington, R. Barua, G. Koorma and H. Farid. "Single and Multi-Speaker Cloned Voice Detection: From Perceptual to Learned Features," 2023 IEEE International Workshop on Information Forensics and Security (WIFS), Nuremberg, Germany, December 2023. (published & peer-reviewed paper with conference presentation)
- S. Barrington, R. Barua, and G. Koorma. 'The Deepfake Fingerprint', *The Nobel Prize Summit, Washington D.C.,* May 2023. (selected prizewinner and presenter).
- S. Barrington, R. Barua, and G. Koorma. Open-Source Projects Showcase, *The Royal Norwegian Embassy, Washington D.C.,* May 2023. (talk)
- S. Barrington and H. Farid. A comparative analysis of human and AI performance in forensic estimation of physical attributes. *Nature Scientific Reports*, March 2023. (published and peer-reviewed paper)
- S. Barrington and H. Farid. 'Perceptual estimates of the physical attributes of people in photographs', *Annual Meeting of the Vision Sciences Society*, May 2023. (poster presentation)
- S. Barrington. 'Forensic Height and Weight Estimation: AI versus Experts versus Non-Experts', *School of Optometry, University of California, Berkeley*, November 2022. (talk)
- S. Barrington. 'Biometric Identification in the Criminal Justice System', *Stanford Social Media Lab*, November 2022 (talk)
- S. Barrington. Preliminary Findings on the Permanence of Web 3.0 Assets. *Crypto Economics Security Conference*, Berkeley Center for Responsible Decentralized Intelligence, November 2022. (poster presentation)
- S. Barrington and N. Merrill. The Fungibility of Non-Fungible Tokens: A Quantitative Analysis of ERC-721 Metadata. *Annual Trust and Safety Research Conference,* Stanford University, September 2022. (poster presentation)
- Technological Innovation in Law Workshop, *CodeX FutureLaw Conference*, Stanford University, April 2022 (co-facilitator)
- Selected student attendee, *Center for Global Security Research (CGSR) Workshop on Extended Deterrence and the Two-War Problem*, Lawrence Livermore National Laboratory, March 2022.

## RESEARCH EXPERIENCE

**Graduate Research Fellow - Berkeley Risk and Security Lab, University of California, Berkeley** June 2023 - present

- Awarded Graduate Fellowship to pursue research at the intersection of AI and cyber defence, working across the UC Berkeley School of Information, BRSL and Center for Long Term Cybersecurity.

**Research Fellow, GetReal Labs** May - Sept 2023

- Summer Researcher in Deep Fake detection and machine learning.

**Researcher - Professor Hany Farid's lab, University of California, Berkeley** May 2022 - present

- PhD Researcher - AI and Forensics.
- Summer Researcher - Artificial Intelligence methods for forensic identification, 3D modeling.
- Graduate Student Researcher - data collection & analysis, computer vision, digital forensics.

**Research Grantee - Center for Long Term Cybersecurity, University of California, Berkeley** Jan 2022 - present

- Algorithmic Detection and Decentralized Moderation for Protecting Women from Online Abuse (project supervisor: Professor AnnaLee Saxenian).
- Quantitative Analysis of ERC-721 Metadata (research supervisor: Dr. Nick Merrill).

**Research & Innovation Fellow, OpenEarth Foundation** Nov 2021 - Feb 2022

- Decentralized climate reporting, telemetry and streaming data analysis, predictive CO2 emissions modeling (research supervisor: Dr. Martin Wainstein).

## PROFESSIONAL EXPERIENCE

**Rapporteur, OpenAI & Berkeley Risk and Security Laboratory** Jan 2023

- Selected student host for 2-day workshop on Confidence-Building Measures for Artificial Intelligence

**Data Science Lead - Anmut Consulting Ltd.** Nov 2019 - Aug 2021

- Post-acquisition technical lead for UK government and pharmaceutical Data Science contracts.

**Co-Founder, Chief Technical Officer - CAL Social** Oct 2017 - Aug 2021

- Technical lead of 10 person team servicing global clients with analytics-led digital marketing campaigns.

**Founder, Chief Executive Officer - Coyote.ai (acquired by Anmut Consulting Ltd. in 2019)** July 2018 - Nov 2019

- Start-up developing automated trading strategies and predictive analytics for blockchain & crypto-finance firms in the UK and US. Grew and managed a team of 7 engineers before negotiating acquisition process.

**Data Scientist & Associate Engineer, McLaren Technology Group** June 2015 - July 2018

- Data Scientist, Modeling & Decision Sciences - Research Lead for motorsport 'driver fingerprint' semi-supervised learning algorithm.
- Associate Engineer, Software and Analytics - Data & Decision Support Lead for projects sponsored by clients such as KPMG, Deloitte and BP.
- Intern, Software and Analytics - advanced analytics support including simulation, optimization and regression for prediction in motorsport and business contexts.

**Internships & Student Positions**

- President - Cambridge University Engineering Society (2015-16), Senior Team Coordinator - Cambridge University Eco Racing Team (2014-15), Spring Intern - Goldman Sachs (2014), Summer Analyst - BlackRock (2014), Summer Analyst - Verdantix (2013).

## AWARDS

- 2023 selected prize-winner, open-source innovations for information integrity- *the Nobel Prize Summit via the United Nations Development Program & Digital Public Goods Alliance (project: 'The Deepfake Fingerprint')*
- 2023-2024 Research Fellow - *Berkeley Risk and Security Laboratory, UC Berkeley*
- 2023-2024 Cal Cybersecurity Research Fellowship - *Center for Long Term Cybersecurity, UC Berkeley*
- 2023 Berkeley Fellowship PhD Awardee- *University-wide, UC Berkeley*
- 2023 Project Grant Winner (Deepfake Fingerprinting)- *Center for Long Term Cybersecurity, UC Berkeley*
- 2022 Innovation Catalyst Ignite Grant - *Jacobs Institute, UC Berkeley*
- 2022 Grand Pitch and Honorable Mention Prizes - *University of California Big Ideas Contest*
- 2022 Research Grantee Award Winner - *Center for Long Term Cybersecurity, UC Berkeley*
- 2021-22 US-UK Fulbright Scholar, Elsevier Award for Data & Analytics - *US-UK Fulbright Commission*
- 2017 Scholarship Visionary of the Year - *Institution of Mechanical Engineers (IMechE)*
- 2016 Anne Jemima Clough prize for academic excellence - *Newnham College, University of Cambridge*
- 2016 Eleanor Sidgwick prize for outstanding dissertation performance - *Newnham College, University of Cambridge* (supervisor: Prof. Andy Neely, O.B.E. in collaboration with UK Government)
- 2013 Most Entrepreneurial Society (as Senior Coordinator of Cambridge University Eco Racing) - *Royal Bank of Scotland*
- 2012-16 James Clayton Undergraduate Scholarship - *Institution of Mechanical Engineers (IMechE)*