

# ADHITHYA SARAVANAN

EDUCATION	<p><b>Department of Statistics, University of Oxford</b> <span style="float: right;">Oxford, UK</span>  <i>DPhil in Machine Learning and Statistics</i> <span style="float: right;">2024 - 2028</span></p> <ul style="list-style-type: none"> <li>• Advisors: Prof. Tom Rainforth, Prof. Yee Whye Teh</li> <li>• Research Area: Active Learning, Bayesian Experimental Design, Generative Models</li> </ul> <p><b>Department of Engineering, University of Cambridge</b> <span style="float: right;">Cambridge, UK</span>  <i>BA &amp; MEng in Computer and Information Engineering</i> <span style="float: right;">2020 - 2024</span></p> <ul style="list-style-type: none"> <li>• BA Grade: Class I (Top 5%), MEng Grade: Honours with Distinction (Top 10%)</li> <li>• Master's Thesis: Certification of Bayesian Neural Networks (Advisor: Dr. Adrian Weller, Dr. Matthew Wicker)</li> </ul> <p><b>Greenhead College</b> <span style="float: right;">Huddersfield, UK</span>  <i>A-Levels</i> <span style="float: right;">2018 - 2020</span></p> <ul style="list-style-type: none"> <li>• 4 A* in Mathematics, Further Mathematics, Physics and Chemistry</li> </ul>
PUBLICATIONS	<p><b>Locking Machine Learning Models into Hardware</b>  <i>Under-review, 2024</i>  Eleanor Clifford*, <b>Adhithya Saravanan*</b>, Harry Langford*, Cheng Zhang, Yiren Zhao, Robert Mullins, Iliia Shumailov, Jamie Hayes.</p> <p><b>ChatGPT Based Data Augmentation for Improved Parameter-Efficient Debiasing of LLMs</b>  <i>Conference on Language Modeling, 2024</i>  Pengrui Han, Rafal Kocielnik, <b>Adhithya Saravanan</b>, Roy Jiang, Or Sharir, Anima Anandkumar.</p> <p><b>Exploring Social Bias in Downstream Applications of Text-to-Image Foundation Models</b>  <i>ICBINB: Workshop @ NeurIPS, 2023</i>  <b>Adhithya Saravanan</b>, Rafal Kocielnik, Roy Jiang, Pengrui Han, Anima Anandkumar.</p> <p><b>Empowering Domain Experts to Detect Social Bias in Generative AI</b>  <i>XAI in Action: Workshop @ NeurIPS, 2023</i>  Roy Jiang, Rafal Kocielnik, <b>Adhithya Saravanan</b>, Pengrui Han, R. Michael Alvarez, Anima Anandkumar.</p>
INTERNSHIPS	<p><b>Machine Learning Research Intern, Caltech</b>   Pasadena, California <span style="float: right;">June 2023 - October 2023</span></p> <ul style="list-style-type: none"> <li>• Researched social bias in generative models under the guidance of Prof. Anima Anandkumar and Dr. Rafal Kocielnik. Published two papers at NeurIPS workshops.</li> </ul> <p><b>Software Engineering Intern, Bolt6</b>   London, UK <span style="float: right;">July 2022 - September 2022</span></p> <ul style="list-style-type: none"> <li>• Developed a deep learning-based player re-identification system for PGA Tour.</li> <li>• Ported the model to C++ for distributed GPU deployment and built a proof-of-concept workflow for querying and asserting matches.</li> </ul>
AWARDS AND HONORS	<ul style="list-style-type: none"> <li>• Summer Undergraduate Research Fellowship (Caltech) <span style="float: right;">2023</span></li> <li>• Engineering Ball Grant for Caltech research internship (Selwyn College, Cambridge) <span style="float: right;">2023</span></li> <li>• 'Christopher Johnson' prize for academic and extra-curricular contributions to Selwyn College (2 students out of 500) <span style="float: right;">2023</span></li> <li>• 'Harrison'/'Powrie' prize for top-of-the-class exam results at Selwyn College <span style="float: right;">2021/2023</span></li> <li>• 'Tripos' prize and scholarship for first-class examination results <span style="float: right;">2021, 2022, 2023</span></li> <li>• Institute of Engineering and Technology Diamond Jubilee Scholar <span style="float: right;">2020 - 2024</span></li> </ul>

PROJECTS	<b>Hardware-aware ML for Governance and Safety</b> <i>DeepWok Lab, Imperial College London</i> 2023
	<ul style="list-style-type: none"> <li>• Collaborated with several students under the supervision of Prof. Zhao (Imperial) and Dr. Shumailov (Google Deepmind) on hardware-aware ML. Finalised pre-print.</li> </ul>
	<b>Logic Simulator (IIB Engineering Project) (Repo.)</b> <i>University of Cambridge</i> 2022
	<ul style="list-style-type: none"> <li>• Developed a logic simulation program in Python, focusing on best practices in design, testing, and maintenance.</li> </ul>
	<b>Integrated Design Project (IB Engineering Project)</b> <i>University of Cambridge</i> 2021
	<ul style="list-style-type: none"> <li>• Designed, built, and tested an autonomous buggy using C++ and Python, responsible for computer vision systems.</li> </ul>
SKILLS	<b>Programming Languages:</b> Python (PyTorch, TensorFlow), C++, Javascript
	<b>Extracurricular:</b> Cambridge University Cricket Team (2020 - 2023), Selwyn College Cricket Team captain (2021 - 2022), Member of ‘Hermes Sirens’ club (by invitation) for contributions to sport at Selwyn College, Cambridge Robotics (2021 - 2022)
RELEVANT COURSEWORK	<b>PhD (Graduate Courses):</b> Modern Statistical Theory, Bayesian Computation and Modelling, Statistical Machine Learning
	<b>M.Eng.:</b> Advanced Information Theory, Probabilistic Machine Learning, Computational Statistics, Deep Learning, Practical Optimisation, Computational Neuroscience, Computer Systems
	<b>B.A:</b> Signals and Systems, Statistical Signal Processing, Information Theory, Mathematical Methods, Inference, Introduction to Neuroscience, Molecular Bioengineering