

Shyam Tailor

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Education

University of Cambridge

PhD Candidate in Computer Science

October 2019 – Present

- Member of Machine Learning Systems group and supervised by Dr Nicholas Lane. First year spent at University of Oxford; change due to research group move.
- Interests include techniques for enabling efficient on-device machine learning applications through hardware-software co-design. Particularly interested in acceleration of graph neural networks and transformers.
- Two papers accepted at HotMobile 2020 and an ICML workshop in first year.

University of Cambridge

MEng Computer Science

October 2018 – June 2019

- Distinction (rank 2/16, 87%). Specialised in cyber-physical systems and machine learning.
- Dissertation: “*Continuous Auscultation in the Wild*” – supervised by Prof Cecilia Mascolo.
- Work from dissertation being continued by Prof Mascolo’s group with funding from the European Research Council. Paper based on dissertation at a Ubicomp 2020 workshop.

University of Cambridge

BA Computer Science

October 2015 – June 2018

- 1st class honours (rank 3/98, 84%); 1st class achieved in every year of the degree.
- Dissertation: “*Anonymous Proximity Beacons from Smartphones*” – supervised by Dr Robert Harle. Investigated human proximity detection using ordinary Android smartphones – similar to approaches used for COVID-19 contact tracing.
- Results from dissertation published at IEEE PerCom 2018.

Work Experience

Facebook

Software Engineering Intern

June 2018 – September 2018

- On Workplace product team; built REST APIs and bot functionality.

Ensoft

Software Engineering Intern

July 2017 – September 2017

- Wrote a novel automated regression testing tool.
- Project used Python and leveraged an SMT solver to automatically generate test cases.

Additional Experience

Magdalen College, University of Oxford, Middle Common Room (MCR)

Social Secretary

January 2020 – September 2020

- Oversaw the organisation of social events for 200 graduate students in the college.
- Typically organised 2 social events per week, frequently in collaboration with other colleges. Role continued during pandemic with online events.

Hack Cambridge

Member of Organising Committee

July 2017 – October 2018

- Cambridge's main annual student hackathon with approximately 400 attendees per year.
- Personally negotiated over £12,000 worth of sponsorship deals for the 2018 event.

Teaching

- Supervisor – Mobile and Sensor Systems, University of Cambridge (January – March 2021)
- Class tutor – Computer Architecture, University of Oxford (January – March 2020)

Skills

Languages	Experienced: Python; Competent: C/C++; Familiar: SQL, Bash, Java
Tools / Software	Git, Gradle / Maven, Cmake, Common Unix Tools, Android, Linux, PyTorch

Awards and Honours

- John Maheswaran Prize for Highly Commended Part III (MEng) Project – Department of Computer Science and Technology, University of Cambridge (June 2019)
- Foundation Scholarship – Downing College, University of Cambridge (June 2019)
- Huawei Studentship – University of Cambridge (May 2019, declined)
- EPSRC Excellence Award – University of Oxford (March 2019)
- EPSRC Doctoral Training Partnership Scholarship – University of Oxford (March 2019, withdrawn in favour of more prestigious EPSRC Excellence Award)
- Alcan Prize for most successful undergraduate in their penultimate year (physical and applied sciences) – Downing College, University of Cambridge (June 2018)
- Scholarship – Downing College, University of Cambridge (June 2016, 2017 and 2018)

Other

- Hobbies and activities include badminton and bouldering.
- Attend gym approximately 6 hours per week.

Publications

1. Shyam A. Tailor, Jagmohan Chauhan, and Cecilia Mascolo. "A First Step Towards On-Device Monitoring of Body Sounds in the Wild" In *Third International Workshop on Computing for Well-Being (UbiComp)*, 2020
2. Shyam A. Tailor, Javier Fernandes-Marques, and Nicholas D. Lane. "Degree-Quant: Quantization-Aware Training for Graph Neural Networks" In *Graph Representation Learning and Beyond Workshop (ICML)*, 2020
3. Shyam A. Tailor. 'Continuous Auscultation in the Wild', 2019 (Master's Thesis, *Highly Commended*)
4. Catherine Tong, Shyam A. Tailor, and Nicholas D. Lane. 'Are Accelerometers for Activity Recognition a Dead-End?' In *Proceedings of the 21th International Workshop on Mobile Computing Systems and Applications (HotMobile)*, 2020.
5. Shyam A. Tailor. 'Anonymous Proximity Beacons from Smartphones', 2018 (Bachelor's Thesis)
6. Augustin Zidek, Shyam A. Tailor, and Robert Harle. 'Bellrock: Anonymous Proximity Beacons From Personal Devices'. In *2018 IEEE International Conference on Pervasive Computing and Communications (PerCom)*, 1–10. IEEE, 2018.