

# Shyam Tailor

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## Education

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### 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. **Paper based on dissertation won best paper award at WellComp workshop at UbiComp 20.**

### University of Cambridge

BA Computer Science

October 2015 – June 2018

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

## Work Experience

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### 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.

## Publications

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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 (**Best Paper**)
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. 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.
4. Shyam A. Tailor. 'Continuous Auscultation in the Wild', 2019 (Master's Thesis, *Highly Commended*)
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.

## Awards and Honours

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- Best Paper - WellComp 2020
- 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)

## Additional Experience

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### 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

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

## Skills

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**Languages:**                    **Experienced:** Python; **Competent:** C/C++; **Familiar:** SQL, Bash, Java

**Tools and Software:**    Git, Gradle / Maven, Cmake, Common Unix Tools, Android, Linux, PyTorch

## Other

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