

Arslan Chaudhry

Contact Information

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Education

PhD, University of Oxford, United Kingdom

Oct 2016 - December 2020

- **Area:** Machine Learning and Computer Vision
- **Advisor:** Philip H.S. Torr
- **Thesis:** Continual Learning for Efficient Machine Learning
- Studied on the Rhodes Scholarship.

BSc, University of Engineering & Technology, Lahore

Sep 2009 - Aug 2013

- **Area:** Electrical Engineering
 - **CGPA:** 3.95/4.0 (Rank: 1/ 400+; Medalist)
 - **Thesis:** Load balancing of compute intensive applications on Beowulf clusters
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Experience

Research Scientist, Google DeepMind

April 2021 - Present

- *Manager:* Dilan Gorur

Research Intern, Google Research

June 2020 - September 2020

- *Hosts:* Srikumar Ramalingam, Andreas Veit
- *Project:* Mixup regularization for dataset efficiency

Research Intern, Facebook AI

June 2019 - September 2019

- *Hosts:* Albert Gordo, David Lopez-Paz
- *Project:* Experience Replay for Continual Learning

Research Intern, Facebook AI Research

June 2018 - February 2019

- *Hosts:* Mohamed Elhoseiny, Marcus Rohrbach, Marc'aurelio Ranzato
- *Project:* Efficient Lifelong Learning.

Software Developer, Mentor Graphics

June 2013 - Aug 2016

- Developed a Virtual Machine Monitor (VMM)/ Hypervisor for ARM and Intel platforms.

Publications

1. **Arslan Chaudhry**, Albert Gordo, David Lopez-Paz, Puneet K. Dokania, Philip H. S. Torr, *Using Hindsight to Anchor Past Knowledge in Continual Learning*, Association for the Advancement of Artificial Intelligence (AAAI), 2021
 2. **Arslan Chaudhry**, Naeemullah Khan, Puneet Dokania, Philip Torr, *Continual Learning in Low-rank Orthogonal Subspaces*, Neural Information Processing Systems (NeurIPS), 2020
 3. **Arslan Chaudhry**, Marcus Rohrbach, Mohamed Elhoseiny, Thalaiyasingam Ajanthan, Puneet K. Dokania, Philip H.S. Torr, Marc'Aurelio Ranzato; *Continual Learning with Tiny Episodic Memories*, International Conference on Machine Learning (ICML), MTLRL Workshop, 2019
 4. **Arslan Chaudhry**, MarcAurelio Ranzato, Marcus Rohrbach, Mohamed Elhoseiny; *Efficient Lifelong Learning with A-GEM*, International Conference on Learning Representations (ICLR), 2019
 5. **Arslan Chaudhry**, Puneet K. Dokania, Thalaiyasingam Ajanthan, Philip Torr; *Riemannian Walk for Incremental Learning: Understanding Forgetting and Intertransigence*, In the Proceedings of the European Conference on Computer Vision (ECCV), 2018
 6. **Arslan Chaudhry**, Puneet K. Dokania, Philip Torr; *Discovering Class-Specific Pixels for Weakly-Supervised Semantic Segmentation*, In the Proceedings of the British Machine Vision Conference (BMVC), 2017 (**oral**)
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Teaching

Tutorials, **Machine Learning**, Hilary 2020, Trinity 2018, Stanford House (Oxford)
Tutorials, **Networking**, Trinity [2018, 2019] University of Oxford
Tutorials, **Operating Systems**, Hilary [2018, 2019], University of Oxford
Lab, **Software Engineering**, Hilary [2017, 2018, 2019], University of Oxford
Teaching Assistant, **Operating Systems**, Spring 2013, UET, Lahore

Talks

- **KAUST**, Continual Learning in Deep Neural Networks, July 2020
 - **Google Research**, Continual Learning in Deep Neural Networks, July 2020
 - **Google DeepMind**, Continual Learning in Deep Neural Networks, April 2020
 - **UET Lahore**, Machine Learning Introduction, December 2017
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Computing Expertise

Languages:	Python, C, C++
Programming Paradigms:	Linux Kernel and Driver Development, Parallel Programming, CUDA Programming
Machine Learning Frameworks:	Tensorflow, Pytorch
Embedded Systems:	ARM TrustZone, Intel's VT-d and VT-x

Awards
Grants
Fellowships

Amazon Research Award, **2019-2020**
NeurIPS Travel Award, **2019**
ICLR Travel Award, **2018**
Murray Speight Grant, Rhodes House, **2018**
Rhodes Scholar, **2016**
Performance Excellence Award, Virtualization Team, Mentor Graphics ESD, **2015**
Topper and Gold medalist of Electrical Engineering Department, UET Lahore, **2013**
Deans Honors List, UET Lahore, **2009-2013**
Nominated for IEEE Region 10 executive comity by IEEE Lahore Section, **2013**
Obtained third position in BLOSSOM held by MIT officials at PYF, **2012**
Winner of Race to Innovation in Pakistan Student Congress, **2012**
Obtained third position in Pakistan in IEEE Xtreme Programming Competition, **2012**
PCS scholarship recipient worth PKR 113980, **2007-2009**

Service

Reviewer for ICML [19-22], NeurIPS [19-21], ICLR [21], AISTATS[22], CVPR [19-20], ECCV[20], ICCV [19]
Reviewer for TPAMI, JMLR, IEEE Transaction on Multimedia