Arslan Chaudhry

Contact Information

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Education

University of Oxford, United Kingdom **Oct 2016 - Present**
Doctor of Philosophy (DPhil) in Machine Learning and Computer Vision

- Advisor: Philip H.S. Torr
- Focus: Machine learning models for continual/ lifelong learning and modular representations in deep networks.
- **Rhodes Scholar (2016)**

University of Engineering & Technology, Lahore, Pakistan **August 2013**
Bachelor of Science in Electrical Engineering

- *CGPA:* 3.95/4.0 (Highest honors)
- Multiple gold medals for graduating at the top of 400+ students graduating class
- Thesis: Load balancing of compute intensive applications on Beowulf clusters

Professional Experience

Research Intern, Facebook AI **June 2019 - September 2019**

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

Visiting Researcher, Facebook AI Research (FAIR) **June 2018 - February 2019**

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

Sr. Software Development Engineer, Mentor Graphics **June 2013 - Aug 2016**
Developed a Virtual Machine Monitor (VMM)/ Hypervisor for ARM and Intel platforms. Lead the development of:

- Secured (using TrustZone – ARM) and virtualized (VT-x/ VT-d – Intel) Memory Management Unit (MMU)
- Networking and console drivers based on virt-IO
- Profiling and visualization toolkit
- Build/ configure and packaging system
- → Received multiple performance excellence awards

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, International Conference on Learning Representations (ICLR), 2020 (Under Submission).
2. **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.

3. **Arslan Chaudhry**, MarcAurelio Ranzato, Marcus Rohrbach, Mohamed Elhoseiny; *Efficient Lifelong Learning with A-GEM*, International Conference on Learning Representations (ICLR), 2019.
4. **Arslan Chaudhry**, Puneet K. Dokania, Thalaiyasingam Ajanthan, Philip Torr; *Riemannian Walk for Incremental Learning: Understanding Forgetting and Intransigence*, In the Proceedings of the European Conference on Computer Vision (ECCV), 2018.
5. **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)**

Teaching

Tutorials, **Machine Learning**, Trinity 2018, Stanford House
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

Computing Expertise

Languages:	C, C++, Python, numpy, Shell Scripting, SQL, PHP, Eclipse P2 Development, Verilog (HDL), Assembly language (ARM, x86, MIPS and 80c51), GNU/Linux Programming, MATLAB, LaTeX
Programming Paradigms:	CUDA Programming, System Programming, Linux Kernel and Driver Development, Parallel Programming, Application Level Programming, Agile Sprint Development
Machine Learning Frameworks:	Tensorflow, Pytorch, Keras
Advanced MPS Modules:	ARM TrustZone, Intel's VT-d and VT-x

Leadership Activities

President, IEEE UET Lahore **June 2012 - June 2013**
As president, I was responsible for the overall performance of the chapter. Presided all technical, budget and alumni committee meetings. Represented the society at the *Pakistan Student Congress 2012*. The chapter won the *Best Student Branch of Lahore Section* award during my tenure.

Awards Grants Fellowships

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 [2019-2020], NeurIPS [2019-], CVPR [2019-2020], ICCV [2019-]
Reviewer for IEEE Transaction on Multimedia