Arslan Chaudhry

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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:* I am working in *Torr Vision Group (TVG)* as a Doctoral Researcher focusing on continual learning in visual scene understanding agents. Particular emphasis is on learning from weak cues and solving catastrophic forgetting in neural networks
- Rhodes Scholar (2016)

University of Engineering & Technology, Lahore, Pakistan **August 2013**
Bachelor of Science in Electrical Engineering
- *CGPA:* 3.946/4.0 (Graduated at the TOP of 400+ students graduating class)
- **Three Gold Medals** for scoring the highest *CGPA*
- *Thesis:* Load Balancing of Compute Intensive Applications on Beowulf Clusters.

Publications

Arslan Chaudhry, Marc'Aurelio Ranzato, Marcus Rohrbach, Mohamed Elhoseiny; *Efficient Lifelong Learning with A-GEM*, Under submission to International Conference on Learning Representations (ICLR), 2019.

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.

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)**

Graduate Internships

Facebook AI Research (FAIR)   Jun 2018 - September 2018

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

Professional Experience

Visiting Researcher, Facebook AI Research (FAIR) **Oct 2018 - Dec 2018**
Forward transfer in Lifelong Learning models.

Sr. Software Development Engineer, Mentor Graphics **Aug 2015 - Aug 2016**
Developed Virtual Machine Monitor (MMU) for *Intel* SOCs. Exploited *Intel's VT-x* and *VT-d* technologies. Developed *Extended Page Table (EPT)* based memory virtualization model. Developed *virt-IO* based networking driver for network sharing among multiple guests.

Sr. Software Development Engineer, Mentor Graphics **Jul 2014 - Jul 2015**
Ported *Xilinx's zynq-zc702*, *FreeScale's i.MX6* and *TI's Jacinto6* on Mentor Embed-

ded Hypervisor (MEHV). Exploited *ARM TrustZone* to implement *Trusted Execution Environment (TEE)* in the VMM. Developed *virt-IO* based *console* and *net* drivers.

Software Development Engineer, Mentor Graphics   **June 2013 - July 2014**
Worked on Mentor's virtualization solution, *MEHV*, for *ARM* SOCs. Developed *Profiling* solution, *DDC* tool - which can extract multiple device tree blobs from a parent device tree based on *VM* definitions - Eclipse P2 based packaging solution and build/configuration system of MEHV.

Teaching	Undergraduate Tutorials, **Machine Learning**, Trinity 2018, Stanford House
	Graduate Teaching Assistant, **Networking**, Trinity 2018, University of Oxford
	Graduate Teaching Assistant, **Operating Systems**, Hilary 2018, University of Oxford
	Lab Demonstrator, **Software Engineering**, Hilary 2018, University of Oxford
	Lab Demonstrator, **Software Engineering**, Hilary 2017, University of Oxford
	Teaching Assistant, **Operating Systems**, Spring 2013, UET, Lahore

Computer Skills	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, 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**

Side Activities

Mountains Explorer
Sports Freak
Follower of the Indian sub-continent music and semi-pop
Mentor Graphics, Lahore office Foosball, Pool champion and Cricket league winner

Referees

Philip Torr
Professor
Department of Engineering Science
University of Oxford, United Kingdom
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Puneet Dokania
Post-Doctoral Researcher
Department of Engineering Science
University of Oxford, United Kingdom
email: puneetkdokania@gmail.com