

Carlos Riquelme

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SUMMARY

I work on designing & training efficient machine learning models at the largest scale at Google. My focus are models that handle multimodal data (language, vision, audio) and how to speed up inference with tools such as sparsity, distillation, pruning, model cascades, early exits, or quantization.

EXPERIENCE

Google Brain *June 2017 – Present*
Senior Research Scientist. *Mountain View, US, until 2018. Currently in Zurich, Switzerland.*
– Project lead for sparse models that learn to apply adaptive levels of compute per input (*Pathways*).
– Design, implementation & training of large-scale language and vision models (PaLI, VIT-22B, LIMoE).
– Recent work on model distillation, adaptation and prompting.
– Previous work on reinforcement learning, deep bandits, active learning & uncertainty estimation.
– Technical lead for selected collaborations with Google X.

Summer Internships (Bay Area): **Facebook** (2016), **Twitter** (2015), **Quora** (2014), **Adobe** (2013).

EDUCATION

Stanford University *September 2012 – June 2017*
PhD in Machine Learning & Statistics Online Active Learning with Linear Models

University of Oxford *September 2011 – September 2012*
MSc in Mathematics and Foundations of Computer Science Distinction (95/100).

Universidad Autónoma de Madrid *September 2006 – June 2011*
BEng Computer Science First Class Honours
BA Mathematics First Class Honours

Imperial College London *September 2009 – June 2010*
Exchange student in the Department of Mathematics

SELECTED AWARDS, FELLOWSHIPS AND SCHOLARSHIPS

Floodgate Fund, Venture Capital firm based in Palo Alto, CA. *September 2014 – June 2015*
Tech Advisor for *Radical Science* projects, working with partner Ann Miura-Ko (Twitter, Lyft, AngelList).

Fellow at SUM 2014 (Stanford - USTC - MIT) *Hefei & Beijing, China. September 2014*
Summer entrepreneurship program; broad perspective of business, technology and startups in China.

Hyundai Brilliant Young Entrepreneurs Award (ErgonDesk project, \$20K Prize) *May 2014*

DARPA Graduate Research Assistantship *September 2013 – December 2014*
US Defense Advanced Research Projects Agency grant to work on Online Stochastic Matching algorithms.

Brasenose Prize for Outstanding Performance in Mathematics *University of Oxford, 2012*

Fundación Caja Madrid Scholar *September 2011 - September 2012*
Full scholarship nationally awarded to two students in Mathematics. Attended the University of Oxford.

University Academic Excellence Scholarship *Madrid City Council, Spain*
Granted to top 0.05% achieving students across all Madrid universities. Awarded in 2007, 2008 & 2009.

Volunteering Guatemala (*Cooperatour*, 2008) & Nepal (*Raleigh International*, 2019).

Languages Spanish (native), English.

Athletics Stanford Men's Club Soccer. Brasenose College Rowing Club.