Hyunjik Kim

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Areas of interest

Video Generation Latent Space Design, Data Annotation, Scaling Laws, Decoding, Evaluation, Controllability, Inference.

Neural Compression Efficient image and video compression with fast decoding. Compression with neural fields.

Work

Apr 2025 onwards **ML Researcher at Apple**, New York, US.

Sep 2017 – Jan 2025 **Research Scientist at Google DeepMind**, London, UK.

Jun – Sep 2017 **Research Intern at DeepMind**, London, UK.

Jun – Aug 2015 **Research Intern at Microsoft Research (MSR)**, Cambridge, UK.

Education

Oct 2015 - Jul 2019 **University of Oxford**, PhD in Machine Learning.
- Areas of Research: Attention, Disentangling, Deep Generative Models, Gaussian Processes
- Supervised by **Yee Whye Teh**, Professor of Statistical Machine Learning of the Statistics Department.

2011 – 2015 **Trinity College, University of Cambridge**, BA (Hons.), MMath in Mathematics.
- **Part IA:** First Class Honours **Part IB:** First Class Honours **Part II:** First Class Honours **Part III(MMath):** Distinction

2007 – 2011 **Hampton School**, Middlesex.
- **Balkan Mathematical Olympiad:** Bronze Medal (Member of UK national Team)
- **British Mathematical Olympiad:** UK top 10. **British Physics Olympiad:** Gold Medal, UK top 20

Highlight Work / Publications

See Google Scholar for full list.

2024 One of 20 full-time core contributors to Veo, Google's most capable video generation model to date. Work focused on pre-training: data, latent space design and deocder.

2024 **Kim***, Bauer*, Theis, Schwarz, Dupont*. **C3: High-performance and low-complexity neural compression from a single image or video**. *CVPR 2024.*

2023 Bauer*, Dupont, Brock, Rosenbaum, Schwarz, **Kim***. **Spatial Functa: Scaling Functa to ImageNet Classification and Generation**. *ICLR 2023 WOrkshop: Neural Fields across Fields.*

2022 Dupont*, **Kim***, Eslami, Rezende, Rosenbaum. **From data to functa: Your data point is a function and you can treat it like one**. *ICML 2022.*

2021 J. Xu, **H. Kim**, T. Rainforth, Y. W. Teh. **Group Equivariant Subsampling**. *Neurips 2021.*

2021 M. Hutchinson, C. Le Lan, S. Zaidi, E. Dupont, Y. W. Teh, **H. Kim**. **LieTransformer: Equivariant Self-Attention for Lie Groups**. *ICML 2021.*

2021 **H. Kim**, Papamakarios, Mnih. **The Lipschitz Constant of Self-Attention**. *ICML 2021.*

2019 **H. Kim** et al. **Attentive Neural Processes**. *ICLR 2019.*

2018 **H. Kim** and A. Mnih. **Disentangling by Factorising**. *ICML 2018.*

Academic Services

2024 Invited Talk at **CVPR 2024 Workshop on Implicit Neural Representations for Vision**

2023 Lead Organizer of ICLR 2023 First workshop on Neural Fields: **Neural Fields across all Fields**

2018-2024 Revewer at NeurIPS, CVPR, ICML, ICLR, AISTATS, UAI

Additional Skills/Activities

Languages Korean(Native), English(Fluent), French(Advanced-C1), Spanish(Intermediate-B2), Japanese(Intermediate-N3)

Leadership Undergraduate President of Cambridge University Korean Society(CUKS)[2012-2013]

Sport Active football (soccer) player. Founder, captain and player of DeepMind football team **Neural Netters**. Also played with *Oxford Worcester College and Oxford University Korean Society.*

Referees

Yee Whye Teh (PhD Supervisor) **Department of Statistics, University of Oxford**, 24-29 St Giles, Oxford OX1 3LB, y.w.teh@stats.ox.ac.uk.

Sander Dieleman (Manager at GDM) **DeepMind**, Six Pancras Square, Kings Cross, London N1C 4AG, sedielem@google.com.