Harry Askham | CV

I am a software engineer with eleven years of professional experience, five of which have been focused on building and leading high-performing teams across both Google and DeepMind.

My work has spanned from widely used full-stack web applications to machine learning research published in *Nature*.

I am interested in solving the engineering challenges that arise when deploying the scientific state-of-the-art in the real world.

Education

University of Cambridge

Christ's College Oct 2008 – Jun 2011

BA (Hons.), MA (Cantab), Computer Science (2.1)

University of London

Birkbeck College Oct 2014 – Aug 2016

MSc Cognition & Computation (Distinction)

University of London

Birkbeck College Oct 2021 – Aug 2022

Mathematics Graduate Certificate (Ongoing)

Experience

DeepMind London

Senior Staff Software Engineer, Applied

Aug 2020 – Present

• Engineering lead focused on delivering real-world applications of DeepMind's breakthrough AI.

Google London

Engineering Lead, Health Research UK

Jan 2019 – Aug 2020

- Grew and led Google Health's 23-engineer research team in the UK.
- Managed three subteams across ophthalmology, radiotherapy and medical records research.
- Focused on the safe deployment of state-of-the-art machine learning models in clinical settings.

DeepMind London

Staff Software Engineer, Health Research

Oct 2016 – Jan 2019

- Built and led a 12-person engineering team in Health Research.
- Designed and built the infrastructure behind several *Nature*-family publications.
- Led the *sui generis* deployment of best-in-class clinical predictions to doctors via an iOS app.

Google London

Senior Software Engineer, AdWords & Sales

Oct 2011 - Oct 2016

- Tech lead for full-stack team of 8 engineers building high-revenue sales tools.
- Led engineering for a knowledge management system relied upon by 20,000+ Google salespeople.

Bloomberg London

Research & Development (Internship)

Jun 2010 - Sep 2010

- Given sole control of an important, time-critical project.
- Designed and delivered a suite of network simulation and testing tools in C++.

Skills

- o Hiring, building and leading highly effective engineering and research teams
- Designing and implementing complex Google-scale distributed systems
- Leading the practical, real-world deployment of cutting-edge machine learning models
- Running full-stack production application development projects from inception to launch

Languages

- o Significant Haskell experience, and a passion for functional programming
- Python and its ecosystem (TensorFlow, PyTorch, Jax, NumPy, SciPy, etc)
- o JavaScript, TypeScript, PureScript, Elm and experience with modern web development
- o iOS + MacOS development experience in both Swift and Objective-C
- Less recent multi-year professional experience in C++, Go and Java

Selected Publications

Nikolov, Stanislav, Sam Blackwell, Alexei Zverovitch, Ruheena Mendes, Michelle Livne, Jeffrey De Fauw, Yojan Patel, Clemens Meyer, **Harry Askham** et al. "Clinically Applicable Segmentation of Head and Neck Anatomy for Radiotherapy: Deep Learning Algorithm Development and Validation Study." Journal of Medical Internet Research 23, no. 7 (2021): e26151.

Tomašev, Nenad, Natalie Harris, Sebastien Baur, Anne Mottram, Xavier Glorot, Jack W. Rae, Michal Zielinski, **Harry Askham** et al. "Use of deep learning to develop continuous-risk models for adverse event prediction from electronic health records." **Nature Protocols** (2021): 1-23.

Yim, Jason, Reena Chopra, Terry Spitz, Jim Winkens, Annette Obika, Christopher Kelly, **Harry Askham** et al. "Predicting conversion to wet age-related macular degeneration using deep learning." **Nature Medicine** (2020): 1-8.

Tomašev, Nenad, Xavier Glorot, Jack W. Rae, Michal Zielinski, **Harry Askham**, Andre Saraiva, Anne Mottram et al. "A clinically applicable approach to continuous prediction of future acute kidney injury." **Nature** 572, no. 7767 (2019): 116-119.

De Fauw, Jeffrey, Joseph R. Ledsam, Bernardino Romera-Paredes, Stanislav Nikolov, Nenad Tomasev, Sam Blackwell, **Harry Askham** et al. "Clinically applicable deep learning for diagnosis and referral in retinal disease." **Nature Medicine** 24, no. 9 (2018): 1342-1350.

Wagner, Siegfried Karl, Reena Chopra, Joseph R. Ledsam, Harry Askham, Sam Blackwell, Livia Faes, Konstantinos Balaskas, Trevor Back, and Pearse Andrew Keane. "Diagnostic accuracy and interobserver variability of macular disease evaluation using optical coherence tomography." Investigative Ophthalmology & Visual Science 60, no. 9 (2019): 1849-1849.

Quercia, Daniele, **Harry Askham**, and Jon Crowcroft. "TweetLDA: supervised topic classification and link prediction in Twitter." In Proceedings of the 4th Annual ACM Web Science Conference, pp. 247-250. 2012.