Sagar **Joglekar**, Ph.D.

sagar.joglekar@gmail.com sagarjoglekar.com

Letchworth Garden City, UK: SG6 4TS

I am keen on leading impactful research driven solutions for data science problems, by pragmatically leveraging advances in representation learning and machine learning. I bring forth over 7 years of experience from different stages of technology development: from research, to consulting, to product engineering and development.

Education

Doctor of Philosophy (Ph.D.), Computer Science, **King's College London, United Kingdom** 2019

Master of Science (M.S.), Electrical and Computer Engineering, **U.C. Santa Barbara, U.S.A.** 2012

Bachelor of Engineering (B.E.), Electronics Engineering, **University of Pune, India** 2008

Research Publications & Patents

I have lead or co-authored over 30 scientific publications in top tier peer-reviewed conferences and journals (e.g. WWW, ICWSM, CSCW, Royal Society, Nature, JMIR etc.), and multiple patents

Experience

Machine Learning Scientist, Expedia Group, London, UK 07/21–Now

Work with the Content Data Science team to develop ML driven services that deal with curation, ranking, and retrieval of the content hosted on the Expedia Group products. This includes images, reviews, and structured meta data. Some salient points of my role are

- Acquire specifications for content data science problems from stakeholders.
- Develop work plans, scoping of discovery, and manage timelines.
- Curate the data required for solving the bespoke data science problems.
- Lead discovery, development, and benchmarking of machine learning solutions.
- Work with engineering teams to package and productionize models.
- Communicate internally and externally about the work.

Research Scientist, Nokia Bell Labs, Cambridge, UK 06/19–07/21

As a member of the Bell Labs Social dynamics team, I worked on problems to quantify social dynamics from large scale data. My role primarily spans two dimensions:

- **External impact** I develop methods and frameworks which could help us quantify real social phenomena using large scale data and tools from statistics, Computer vision, Natural language processing, deep learning, and complex networks. For example:
  - Build models that can predict health outcomes at geo-spatial scales using social media data and openly available NHS GP prescriptions data.
  - Quantify intangible and subjective properties, like urban aesthetics and gentrification, using Streetview images or openly available satellite images.
  - Use openly available social media text data (Reddit) to predict prevalence of mental health diseases at geo-spatial scales.
  - Publish research in top tier journals and conferences.
- **Internal impact** Designed and developed tools for data processing, sensing, and sense-making problems covering a wide range of applications inside Nokia's internal ecosystem. Develop API services that wrapped the models developed in research for internal and external use.

Research Intern, Nokia Bell Labs, Cambridge, UK 06/17–11/17

Worked on explainable deep learning models that modelled the perception of intangible attributes like beauty, safety and liveliness.

Head of Research, Firedrop.ai, London, UK 06/16–06/17

I conducted research in order to understand feasibility of different machine learning algorithms for Firedrop products. Key contributions were

- Help the team adopt advanced machine learning research into systems that solve optimization problems.
- Develop proof of concepts for new features.
- Consult the leadership on strategy around ML technology ramp up.

Data science consultant, HackMasters, London, UK 03/16–05/19

I consulted HackMasters in the capacity of a data scientist/engineer on projects that covered areas of data governance, data driven strategy, or designing/prototyping machine Learning driven systems for their clients.

Ph.D. Fellow (King's India Scholar), King's College London, UK 09/15–12/19

Worked on my Ph.D. at King's college on modelling the perception of subjective quantities from large scale online interactions data.

Senior Software Engineer, Citrix Systems (now LogMeIn), Santa Barbara, U.S.A 02/12–09/15

As a senior software engineer I designed and implemented several proprietary network communications platforms libraries for Android, iOS and the web. Some salient achievements were:

- I was a major contributor in design and development of the network communications platform for our newly launched GotoMeeting web client. I designed and implemented a brand new protocol for bandwidth optimized transport of screen-sharing data across HTML5 (web), native, and mobile clients.
- Helped develop a centralized API first platform, packaging Citrix's communications protocol stack. This culminated into a scalable and maintainable communication layer which is now being used across all video conferencing products at Citrix.
- Part of the inventor team for GoToSeeit, which augments the remote assistance product "GotoAssist", with real-time augmented reality annotations and audio. This innovation allowed GotoAssist to expand into on-site support market.

Engineering Intern, Citrix Systems, Santa Barbara, U.S.A 06/11–12/11

As an intern, I worked on porting the proprietary automated testing frameworks on Android.

Systems and Bio-imaging Lab, Santa Barbara, U.S.A 01/11–06/11

As a graduate student researcher, I worked on research and development of computer vision system that produced fluorescent microscopy HDR images of dynamic biological samples.

Research Engineer, Infosys Research Labs, Pune, India 07/08–07/10

The key responsibilities of this role were :

- Research and development of solutions, exploring use of cutting edge computer vision in digital rights management.
- Produce keystone IP for digital convergence and rights management domain.

Technical skills

- **Programming languages:** Python, Java, C++, Javascript
- **Machine Learning frameworks:** Pytorch, Tensorflow, OpenCV, Scikit-Learn
- **Back-end frameworks:** Nodejs , Django, Flask, Docker
- **Data analysis and mining:** Pandas, Numpy, PySpark , NetworkX
- **Project management:** Agile , Kanban.

Research Demos

FaceLift :
Beautifying neighbourhoods using crowd sourced signals of urban beauty, deep learning, and generative models. :

Vitality from the Sky
Testing Jane Jacob's vitality theory, at scale, using representations learnt from satellite images. :

Humane-AI
Adding humanity to dialogues in healthcare by discovering crowd's medical-speak from mining social media and open sourced medical data. :

Meetcues
Bringing cues of the face-to-face interactions to the online meetings with the help of body and language signals.

Languages **English, Marathi**: Native proficiency, **Hindi** : Conversational proficiency

Personal interests Sci-Fi, reading, philosophy, playing music , Astronomy