Sagar **Joglekar**, Ph.D.

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With over 7 years of experience across different stages of technology development – such as blue sky research, applied research, consulting, and software engineering – I bring forth a unique blend of skills. I am interested in leading impact using a pragmatic combination of data science and ML engineering to solve real business problems.

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 40 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

I work at Expedia on development of ML driven services that curate and rank content such as images, user generated reviews, and structured property related data. Some salient projects are

- Lead the development and delivery of user generated reviews moderation using NLP. Lead experimentation, benchmarking, and sizing initiatives around the use of newer state of the art models. Design, write, and deploy packaged models as services.
- Lead discovery and benchmarking of generative language models for text tagging.
- Contribute to the development of common libraries and tools to incorporate explainability into our models.
- Conduct research and development sprints to discover newer ideas.
- Be a champion for the work and communicate about the work internally.

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 a myriad of social processes 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:
  - Built models that could predict health outcomes at geo-spatial scales using social media data and openly available NHS GP prescriptions data.
  - Built models that could quantify intangible and subjective properties, like urban aesthetics and gentrification, using Streetview images or openly available satellite images.
  - Built models using openly available social media text data (Reddit) to predict prevalence of mental health diseases at geo-spatial scales.

  The result of this work was published in over *15 papers* in top tier conferences and journals. We also filed for *2 patents* based on the research work.
- **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 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 lead the research and development at Firedrop to understand feasibility of different machine learning algorithms for Firedrop products. Key contributions were

- Lead the engineering team to adopt advanced machine learning algorithms into systems that solve optimization problems.
- Develop proof of concepts for new features.
- Consult the leadership on strategy around ML technology.

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.

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