SUMIT SOMAN

Ph.D. (IIT Delhi) - Computer Science (Machine Learning) | Senior Member, IEEE

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EDUCATION

Ph.D. (Machine Learning)

Indian Institute of Technology, Delhi   **Dept. of EE, Computer Technology**

📅 Jan 2015 – Jun 2019   📍 New Delhi (IN)

- Thesis Title: *Empirical Methods for Structural Risk Minimization* 📺
  Key Publications: Quadratic Minimal Complexity Machines, Classifiers with
  Derivative Constraints ◈, Minimal Complexity Extreme Learning Machines ◈,
  EigenSample for Data Augmentation

B. Tech. (Computer Science & Engineering)

GGS Indraprastha University, Delhi

📅 August 2006 – July 2010   📍 New Delhi (IN)

WORK EXPERIENCE

Ericsson R&D   Global AI Accelerator

Senior Data Scientist-II

📅 May 2021 – Present   📍 Bengaluru, Karnataka (IN)

- Generative AI - LLMs, Retrieval Augmented Generation (RAG), AI pair programming
  for telecom use-cases, Ericsson Language Intelligence (ELI) platform.
- Enterprise Conversational Agents using LLMs - Cradlepoint Virtual Expert & Betty.ai
  (BTEB, Ericsson One). - *Research paper published in ICLR 2024 Tiny Papers Track.*
- Managed Services for Networks (MSN), telco site planning tools (8 patents filed) -
  cell tower localization and coverage maps, real-time traffic data fusion for proactive
  anomaly detection.

Centre for Development of Advanced Computing (CDAC)

Prestigious Govt. of India Research Lab under Ministry of Electronics & IT

📅 September 2011 – April 2021   📍 Noida, Uttar Pradesh (IN)

Positions : Principal Technical Officer (Previously Senior TO & TO)
Key Contributions:
- Clinical terminology compliant Automatic Speech Recognition (ASR) - patent filed.
- QoS evaluation on 5G testbeds for EMBB and URLLC use-cases.
- Universal Health IDentifier (UHID) algorithm for India (Copyright Granted).
- Mobile apps for All India Institute of Medical Sciences (AIIMS) hospitals.
- Development of assistive technology using Brain Computer Interfaces (BCI) -Patent
  Granted, Received Skoch Smart Technology Award 2015.

Tata Consultancy Services Pvt. Ltd.   Mobility Group

Assistant Systems Engineer

📅 November 2010 – August 2011   📍 Kochi, Kerala (IN)

- Blackberry app development (telco), DSLR camera interfacing with Android.

SKILLS

Data Science | Conversational Assistants | Generative AI
Federated Learning | Explainable AI | Large Language Models
Retrieval Augmented Generation | Knowledge Graphs | AWS

PROGRAMMING LANGUAGES

Python | Java | SQL | MATLAB | Android SDK

RESEARCH OUTCOMES

Patents	1 (granted), 12 (filed)
Research Papers	20 Journal (2 IEEE Trans)
	35 Conference (A/B rated)
Copyrights	2 (granted)
Citations	615 (h-index:13, i-10 index:19)

RESEARCH INTERESTS

Machine Learning | Optimization
Telecom AI | LLMs | Health Informatics
Brain Computer Interfaces

KEY ACHIEVEMENTS

- **Chair, Executive Committee (2023-24)**
  IEEE Sensors Council Bangalore Chapter
- **Organizing Committee Member**
  Ericsson Developer Conference 2022 and
  2024
- **Key Contributor, Ericsson (2022)**
  Long Term Variable contributor plan.
- **Senior Member, IEEE (2020)**
  Member Grade Elevation of the Institute
  of Electrical and Electronics Engineers.
- **Director General CDAC Young Innovator
  Award (2019)**
  For research contributions at CDAC.
- **ACM Mobicom App Contest (2018)**
  24th ACM Mobicom App Contest .
- **DST SERB Travel Grant (2017)**
  International Travel Support (ITS) scheme
  for young scientists, SERB, DST.

WORKSHOPS/TALKS

- **IEEE WG P2794 (Voting Member)** : Standard for
  Reporting of in-vivo Neural Interface Research.
- Member, IEEE **Neurotechnology Sub-Committee
  for Brain-Machine Interfacing Standards**.
- Member, **Data Management Systems (LITD 15)
  Sectional Committee**, Bureau of Indian Standards.
- **IEEE 5G World Forum 2020** Industry Track
  Demonstration on "Voice-enabled Mobile Clinical
  Prescribing Systems for 5G Networks"
- Invited talk on BCI Standardization at the IEEE
  Systems, Man and Cybernetics (SMC) Conference
  2019 at **Bari, Italy**, Oct 06-09, 2019.
- Talk at *"Trieste Encounters in Cognitive Science
  (TEX 2016)"* **Scuola Internazionale Superiore di
  Studi Avanzati, Trieste, Italy**, July 07-15, 2016.
- Talk at *"Germany-Japan Adaptive BCI Workshop
  2015"* at Graduate School of Informatics, **Kyoto
  University, Kyoto, Japan**, Oct 28-29, 2015.