AKASH ANAND

Figuring out life through Softwares, AI and music

akashanand.iitd@gmail.com | +91-8860893989 | D-502, Pioneer Park, Sector 61
Gurgaon, Haryana, India | akashanand93 | blimitless.akash | akashanand93

SUMMARY STATEMENT

- Passionate about adding value to healthcare through softwares, AI and anything it takes.
- Built and lead development of natural language processing (NLP) and clinical information extraction stack for nFerence.
- Immensely excited about the potential of large language models (LLMs) in clinical and healthcare domain.

EXPERIENCE

Senior Manager - Data Science

nFerence

Oct 2023 – Ongoing | Bangalore, India

- Lead development of multiple LLM based chat applications namely ECG-Explorer, Patient Varta and Chat-Cohorts.
- Build and maintain the entire NLP infrastrcture for nFerence
- Adoption of LLMs for optimising workflows of manual validation and data tagging. Improved efficiency by ~3-4x.
- Lead development of nFerence's NLP model suite comprising of >20 production grade models

Manager - Data Science

nFerence

Oct 2021 – Sep 2023 | Bangalore, India

- Lead development of multiple SDKs like nferai and synthesizer for easy development and usage of NLP models.
- Lead development of nference's at scale clinical information extraction systems with a capability to run >10 models on ~1.4B notes in ~10 days.
- Lead development of nFerence's flagship model suite called HealthcareAPI for generalised clinical information extraction

Technical Lead

nFerence

Jun 2020 – Sep 2021 | Bangalore, India

- Developed one of nFerence's flagship product - InfoX. The product seeks to make automatically curated data from clinical text accessible to users in real time. The product spans multiple systems, microservices and extensive use of distributed computing.

Team Lead - Data Science

nFerence

Aug 2019 – May 2020 | Bangalore, India

- Developed nFerence's flagship product - Signals. The product summarises biomedical concepts and shows relation with other biomedical concepts in an intuitive google style search interface.

PROUD OF

Innovation and Execution
in building best in class NLP infra for Clinical Information extraction at nFerence which spans 10s of components and microservices

Learning and Adapting
to new technologies like LLMs and getting nFerence upto speed with their usage in healthcare domain

Generalist and Specialist
Led and been hands on with numerous techs like golang, Python, C++, React, Deep Learning etc. to develop specilised systems in healthcare

Being Multifaceted
Trained classical musician with more than a decade playing the Sarod. Also a fitness and nutrition freak.

STRENGTHS

Ideas & innovation | Quick Learner | Getting things done

AI/ML | NLP | End to end systems | Distributed Computing

LANGUAGES

English
Hindi

EDUCATION

B.Tech in Electrical Engineering

IIT Delhi

July 2011 – May 2015
CGPA: 9.15/10

Data Scientist

nFerence

Sep 2018 – Jul 2019 | Bangalore, India

- Joined as employee #4 at nFerence's India office.
- Implemented and deployed embedding algorithms like word2vec, context2vec etc. on biomedical data.

Software Engineer

Samsung R&D Institute

Jul 2015 – Aug 2018 | Bangalore, India

- Developing and commercialising Samsung smartwatch based sports analytics solutions. Specifically, involved in development of machine learning based detection and classification algorithms for swing based sports.

REFEREES

Dr. Rakesh Barve
SVP, Data Sciences, nFerence
rbarve@nference.net
+91-9886654143

Vishy Thiagarajan
SVP, Engineering, nFerence
vishy@nference.net
+91-9886756254

Dr. Lakshmi Kaligounder
VP, Data Science, JPMorgan Chase & Co.
+91-7829433444

PUBLICATIONS

Papers

- **A. Anand**, M. Sharma, R. Srivastava, L. Kaligounder, and D. Prakash, "Wearable motion sensor based analysis of swing sports," pp. 261–267, 2017.
- M. Sharma, **A. Anand**, R. Srivastava, and L. Kaligounder, "Wearable audio and imu based shot detection in racquet sports," *arXiv preprint arXiv:1805.05456*, 2018.
- M. Sharma, R. Srivastava, **A. Anand**, D. Prakash, and L. Kaligounder, "Wearable motion sensor based phasic analysis of tennis serve for performance feedback," pp. 5945–5949, 2017.
- A. Venkatakrishnan, A. Puranik, **A. Anand**, *et al.*, "Knowledge synthesis of 100 million biomedical documents augments the deep expression profiling of coronavirus receptors," *Elife*, vol. 9, e58040, 2020.
- T. Wagner, F. Shweta, K. Murugadoss, *et al.*, "Augmented curation of clinical notes from a massive ehr system reveals symptoms of impending covid-19 diagnosis," *Elife*, vol. 9, e58227, 2020.
- C. Pawlowski, A. Venkatakrishnan, E. Ramudu, *et al.*, "Pre-existing conditions are associated with covid-19 patients' hospitalization, despite confirmed clearance of sars-cov-2 virus," *EClinicalMedicine*, vol. 34, 2021.
- A. Venkatakrishnan, C. Pawlowski, D. Zemmour, *et al.*, "Mapping each pre-existing condition's association to short-term and long-term covid-19 complications," *npj digital medicine*, vol. 4, no. 1, p. 117, 2021.
- W. Ip, C. Pawlowski, V. Mathew, *et al.*, "Augmented curation of disease diagnoses and medications for patients with hepatocellular carcinoma.," 2023.
- C. Pawlowski, A. Venkatakrishnan, E. Ramudu, *et al.*, "Pre-existing conditions are associated with long-covid patients hospitalization, despite confirmed clearance of sars-cov-2 virus," 2020.
- A. Venkatakrishnan, C. Pawlowski, D. Zemmour, *et al.*, "Mapping each pre-existing conditions association to short-term and long-term covid-19 complications (preprint)," 2020.

Patents and Applications

- R. Barve, **A. Anand**, A. Puranik, M. Aravamudan, V. Soundararajan, and A. Srinivasan, *Systems and methods for mapping a term to a vector representation in a semantic space*, US Patent App. 17/151,965, Jul. 2021.
- M. Aravamudan, K. Murugadoss, S. Ardhanari, *et al.*, *Systems and methods for computing with private healthcare data*, US Patent 11,848,082, Dec. 2023.
- **A. Anand**, S. Jaiswal, B. Sairam, and R. Barve, *Apparatus and methods for expanding clinical cohorts for improved efficacy of supervised learning*, US Patent App. 18/230,477, Feb. 2024.
- R. Barve, **A. Anand**, S. Gowda, B. Sairam, and P. Sinha, *Systems and methods for retrieving clinical information based on clinical patient data*, US Patent App. 17/500,621, Apr. 2022.
- B. Raghunathan, R. Barve, B. Sairam, V. Jain, **A. Anand**, and A. Rajasekharan, *System and method for improving efficacy of supervised learning*, US Patent App. 18/048,197, Apr. 2023.