Anil K. Ramakrishna

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Research Interests	Responsible AI, Large Language Models, Natural Language Processing, Machine Learning.

Experience

Senior Applied Scientist   July 23 - present
AGI Foundations, Amazon Inc.
Los Angeles, CA
- I work in the Responsible AI team in the AGI Foundations organization. I focus on data curation, model building, model factuality and robust evaluation for Large Language Models.

Applied Scientist   October 19 - July 23
Alexa AI. Amazon Inc.
Los Angeles, CA
- Worked on Data Efficient Learning (for privacy), Interpretable Model Building and Defect Reduction within the Natural Language Understanding subsystem of Alexa Virtual Assistant.

Applied Scientist Intern   May 18 - August 18
Amazon Inc.
Boston, MA
- Developed a model combination strategy to address privacy constraints with shared data training for Amazon's Alexa NLU pipeline.

Systems Administration Assistant   Fall 12 - Spring 14
Computational Biology and Bioinformatics group
University of Southern California, Los Angeles, CA
- Responsible for installation, configuration and trouble shooting of servers with Unix like operating systems.

Systems Software Engineer   June 10 - July 12
Hewlett Packard R&D, Bangalore, India
- Worked on development of two frameworks used for file system validation in HP-UX.

Software Engineering Intern   Jan 10 - May 10
National Instruments R&D, Bangalore, India
- Worked on development of advanced debugging tools in NI's LabVIEW.

Education

Doctor of Philosophy   May 14 - October 19
Computer Science — *GPA: 3.8/4.0*
Advisor: Prof. Shrikanth Narayanan
Signal Analysis and Interpretation Laboratory
University of Southern California, Los Angeles, CA

Master of Science
Electrical Engineering — *GPA: 3.95/4.0*   Fall 18 - Spring 19
Computer Science — *GPA: 3.7/4.0*   Fall 12 - Spring 14
University of Southern California, Los Angeles, CA

Bachelor of Engineering   July 06 - May 10

Information Science — *Agg. %: 80.2/100*
B.M.S. College of Engineering
Visvesvaraya Technological University, Belgaum, India

Patents

Anil K Ramakrishna, Rahul Gupta, Yuval Merhav, Zefei Li, Heather Brooke Spetalnick. *Machine learning model updating.* US Patent #11978438, 2024/5/7.

Shrikanth Narayanan, Victor Martinez Palacios, **Anil Ramakrishna**, Krishna Somandepalli, Nikolaos Malandrakis, Karan Singla, *Linguistic analysis of differences in portrayal of movie characters.* US Patent #11775765, 2023/10/3.

Anoop Kumar, **Anil K Ramakrishna**, Sriram Venkatapathy, Rahul Gupta, Sankaranarayanan Ananthakrishnan, Premkumar Natarajan. *Spoken language understanding models.* US Patent #11574637, 2023/2/7.

Shrikanth Narayanan, Victor Martinez Palacios, **Anil Ramakrishna**, Krishna Somandepalli, Nikolaos Malandrakis, Karan Singla, *Linguistic analysis of differences in portrayal of movie characters.* US Patent #10956679, 2021/3/23.

Additional six patents filed and currently under review by the US patent office.

Academic Service

Organizing Committee
Workshop on Trustworthy NLP, NAACL 2025.
SemEval 2024 Task 4: Unlearning sensitive content from Large Language Models.
Satellite Workshop on Trustworthy Speech Processing, ICASSP 2024.
Special Session on Trustworthy Speech Processing, Interspeech 2022.
Workshop on Trustworthy NLP, NAACL 2021.

Program Committee
2025: ARR (February)
2024: COLM, ARR (April, June, August, October, December).
2023: ACL, ICASSP.
2022: EMNLP, ARR (June), ICASSP, AAAI.
2021: NAACL, EMNLP, ACL-IJCNLP, EACL.
2020: Privacy Preserving ML Workshop (Amazon Machine Learning Conference), EMNLP, The Ninth Joint Conference on Lexical and Computational Semantics, COLING Industrial Track, Palgrave Communications, AAAI.
2019: PLOS One, NAACL.
2018: IEEE Transactions on Affective Computing.

Select Publications

Haw-Shiuan Chang, Nanyun Peng, Mohit Bansal, **Anil Ramakrishna**, Tagyoung Chung. *by Extrapolating the Probabilities of a Huge and Hypothetical LM.* EMNLP, 2024.

Tao Meng, Ninareh Mehrabi, Palash Goyal, **Anil Ramakrishna**, Aram Galstyan, Richard Zemel, Kai-Wei Chang, Rahul Gupta, Charith Peris. *Attribute Controlled Fine-tuning for Large Language Models: A Case Study on Detoxification.* EMNLP, 2024.

Elan Markowitz, **Anil Ramakrishna**, Jwala Dhamala, Ninareh Mehrabi, Charith Peris, Rahul Gupta, Kai-Wei Chang, Aram Galstyan. *Tree-of-Traversals: A Zero-Shot Reasoning Algorithm for Augmenting Black-box Language Models with Knowledge*

Graphs. ACL, 2024.

Haw-Shiuan Chang, Nanyun Peng, Mohit Bansal, **Anil Ramakrishna**, Tagyoung Chung. *REAL Sampling: Boosting Factuality and Diversity of Open-Ended Generation via Asymptotic Entropy.* 2024/6/11.

Anil Ramakrishna, Rahul Gupta, Jens Lehmann, Morteza Ziyadi. *Invite: a testbed of automatically generated invalid questions to evaluate large language models for hallucinations.* EMNLP, 2023.

Ninareh Mehrabi, Palash Goyal, **Anil Ramakrishna**, Jwala Dhamala, Shalini Ghosh, Richard Zemel, Kai-Wei Chang, Aram Galstyan, Rahul Gupta. *JAB: Joint adversarial prompting and belief augmentation.* R0-FoMo: Workshop on Robustness of Few-shot and Zero-shot Learning in Foundation Models at NeurIPS, 2023.

Tiantian Feng, Digbalay Bose, Tuo Zhang, Rajat Hebbar, **Anil Ramakrishna**, Rahul Gupta, Mi Zhang, Salman Avestimehr, Shrikanth Narayanan. *Fedmultimodal: A benchmark for multimodal federated learning.* SIGKDD, 2023.

Rahul Sharma*, **Anil Ramakrishna***, Ansel MacLaughlin, Anna Rumshisky, Jimit Majmudar, Clement Chung, Salman Avestimehr, Rahul Gupta. *Federated learning with noisy user feedback.* NAACL, 2021.

Anil Ramakrishna, Shrikanth Narayanan. *Sentence level estimation of psycholinguistic norms using joint multidimensional annotations.* Interspeech, 2020.

Anil Ramakrishna, Rahul Gupta, Shrikanth Narayanan, *Joint Multi-Dimensional Model for Global and Time-Series Annotations*, in IEEE Transactions on Affective Computing, doi: 10.1109/TAFFC.2020.3006418.

Victor R Martinez, Krishna Somandepalli, Karan Singla, **Anil Ramakrishna**, Yalda T Uhls, Shrikanth Narayanan, *Violence Rating Prediction from Movie Scripts*, in: Proceedings of the Advancement of Artificial Intelligence (AAAI), Honolulu, January 2019.

Anil Ramakrishna, Timothy Greer, David Atkins, Shrikanth Narayanan, *Computational modeling of conversational humor in psychotherapy*, in: Proceedings of Interspeech, Hyderabad, India, 2018.

Anil Ramakrishna, Victor R. Martinez, Nikolaos Malandrakis, Karan Singla and Shrikanth Narayanan, *Linguistic analysis of differences in portrayal of movie characters.* in: Proceedings of Association for Computational Linguistics (ACL), Vancouver, July 2017.

Anil Ramakrishna, Rahul Gupta, Ruth B Grossman, Shrikanth S Narayanan. *An Expectation Maximization Approach to Joint Modeling of Multidimensional Ratings Derived from Multiple Annotators*, Interspeech, 2016.

Anil Ramakrishna, Nikolaos Malandrakis, Elizabeth Staruk and Shrikanth S. Narayanan. *A quantitative analysis of gender differences in movies using psycholinguistic normatives.* in: Proceedings of Empirical Methods in Natural Language Processing (EMNLP), Lisbon, Portugal, 2015.

David Kale, Marjan Ghazvininejad, **Anil Ramakrishna**, Jingrui He and Yan Liu. *Hierarchical Active Transfer Learning.* in: Proceedings of the 2015 SIAM International

Conference on Data Mining (SDM), 2015.

Anil Ramakrishna, Yu-Han Chang, Rajiv Maheswaran. *An interactive web based spatio-temporal visualization system.* International Symposium on Visual Computing, 2013.

A complete list of publications can be found in my Google Scholar page.

Computing Skills	Languages:	Python, BASH shell scripting, C, C++ & Java(Beginner), LaTeX.
	Technical Computing:	MATLAB, GNU Octave, R, LabVIEW(Beginner).
	System Administration:	GNU/Linux, openSUSE.

Service   I'm a certified yoga (200Hour) and breath-work based meditation (1000Hour) instructor. I spend my free time facilitating wellness sessions in university campuses.

Certified Facilitator, Art of Living Foundation	Jan 19 - present
Coordinator, Machine Learning Reading Group, SAIL	Fall 15 - Summer 19
President, Yoga and Meditation Club at USC	Fall 14 - Summer 19
Vice-President, Yoga and Meditation Club at USC	Fall 13 - Spring 14
Volunteer, Art of Living Foundation	07 - present

Nationality   Indian (with US Permanent Residency)