

SUSHMA ANAND AKOJU

RESEARCHER

sushmaanandakaju.github.io

CONTACT

Email
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Phone
646-266-5195

Location
San Francisco, CA

SKILLS

- AI / NLP / Languages
- Computational Geometry
- Representational Geometry
- Theory of Computation
- Vision / Audio Understanding
- Cognitive Science
- Mathematics
- Neurosymbolic Methods
- Python / PyTorch
- Grant Writing & Teaching
- CIRTl Associate, Practitioner, Scholar
- Dale Carnegie High Impact Presentation
- Reviewer: NeurIPS 2026 + Workshops
- Reviewer: ICML / COLM Workshops 2026
- Reviewer: NeSY 2026 / AAAI WS 2025

LANGUAGES

English	Fluent
Japanese	Beginner
Italian	Beginner
Russian	Beginner
Korean	Beginner
Haitian Creole	Beginner

Seeking research-focused roles.
Not interested in programming-
only / software engineering roles.

PROFESSIONAL SUMMARY

Researcher with 12+ years of research and work experience at the intersection of AI, Computational Geometry, Representational Geometry, Theory of Computation, Languages, NLP, Vision/Audio understanding, Cognitive Science, and Mathematics. Since studies at CU Boulder, research has centered on underexplored questions and problems, revisiting past solutions through to the present. Strong background in research, academic writing, curriculum development, and teaching. CIRTl Associate, Practitioner, and Scholar certified; Dale Carnegie High Impact Presentation certified. Seeking research collaborations and PhD funding opportunities at this intersection.

Website: <https://sushmaanandakaju.github.io/>
Google Scholar: <https://scholar.google.com/citations?user=VRJgtD8AAAAJ>
GitHub: <https://github.com/sushmaakaju>

EDUCATION

Doctoral Studies, Computer Science (currently paused) University of New Hampshire	2024–2026
Doctoral Studies, Computer Science (currently paused) University of Arizona	2022–2024
M.S. Computational Science University of Colorado Boulder	2022
M.S. Information Science & Technology University of Pittsburgh	2015
B.Tech. Computer Science Engineering JNTU	

PROFESSIONAL EXPERIENCE

Graduate Student / Teaching Assistant University of New Hampshire	2024 – 2026
• Supported graduate-level instruction and student learning in Computer Science.	
Teaching Assistant – CSC 473 Automata, Grammars & Languages University of Arizona	2023 – 2024
• Taught, graded, and provided solutions; conducted Supplemental Instruction sessions for exam preparation.	
Graduate Research Assistant University of Arizona	2022 – 2023
• Built dataset of location/temporal context from epidemiology papers; trained Transformers-based models for ranking similar contexts.	
Teaching Assistant – Artificial Intelligence & Machine Learning University of Colorado Boulder	Aug 2021 – Apr 2022
• Created course content, led recitations (Word2Vec, GloVe, RNNs/LSTMs, SVMs, CNNs, Gradient Descent), evaluated assignments.	
Research Programmer / Engineer Carnegie Mellon University (Robotics, ML, Comp. Biology, InMind)	Mar 2016 – Jun 2021
• Supported research teams on ML algorithms, data portals (HuBMAP), Android middleware, and socially-aware robotic assistants (SARA, demoed at World Economic Forum & SIGDIAL).	
• Implemented regression models, parsers, and visualization prototypes; contributed to cognitive architectures and never-ending learning systems.	
Prior Industry Experience Infosys, Siemens, Wipro (and related roles)	2003 – 2014
• VoIP, PBX, Video Streaming, Testing, programming, and process/script automation.	

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SELECTED PUBLICATIONS

Finding Consensus from AI Alignment Studies: A Short Survey
AAAI 2026 Bridge – Logical and Symbolic Reasoning in Language Models (Accepted, Fall 2025); also
selected for 7th International Conference on the Mathematics of Neuroscience and AI
First Author
<https://openreview.net/forum?id=izuqOM66Xi>

Synthetic Dataset for Evaluating Complex Compositional Knowledge for Natural Language Inference
NLRSE – ACL Proceedings, 167–178, 2023
First Author (with R. Vacareanu, E. Blanco, H. Riaz, M. Surdeanu)
<https://aclanthology.org/2023.nlrse-1.12/>

The human body at cellular resolution: the NIH Human Biomolecular Atlas Program
Nature, 574(7777), 187–192, 2019 (HuBMAP Consortium)
<https://www.nature.com/articles/s41586-019-1629-x>

Adroitness: An Android-based Middleware for Fast Development of High-performance Apps
arXiv / CORR, 2019 (with O. J. Romero)
<https://arxiv.org/abs/1906.02061>

NLSC: Unrestricted Natural Language-based Service Composition through Sentence Embeddings
IEEE International Conference on Services Computing, 2019
<https://arxiv.org/abs/1901.07910>

An Efficient Mobile-Based Middleware Architecture for Building Robust, High-Performance Apps
IEEE ICSA Companion, 2018
<https://ieeexplore.ieee.org/document/8432189/>

Socially-aware animated intelligent personal assistant agent
SIGDIAL 2016 (with Y. Matsuyama, A. Bhardwaj, R. Zhao, O. J. Romero, J. Cassell)
<https://aclanthology.org/W16-3628/>

AWARDS & RECOGNITION

- #1 on leaderboard – SemEval 2022 Task 4: Patronizing and Condescending Language Detection (first round)
- First Prize – Website Development class project, University of Pittsburgh (2015)
- CIRTl (Center for the Integration of Research, Teaching and Learning) Associate, Practitioner, and Scholar certifications
- Dale Carnegie High Impact Presentation certification
- Innovative idea awards for process improvement and automated security patching (industry)

ADDITIONAL

Professional Service

- Reviewer, NeurIPS 2026 (conference and workshops)
- Reviewer, ICML Workshops 2026
- Reviewer, COLM and COLM Workshops 2026
- Reviewer, NeSY 2026 (Neural-Symbolic Learning and Reasoning)
- Reviewer, AAI Workshops 2025

Volunteer / Memberships

- Community Educator for Consent-based Communication, University of New Hampshire (Jan 2025 – Dec 2025)
- Association for Mathematical Consciousness Science (AMCS), 2023–present; public initiatives on communication and First-Order Logic (see website)

Selected Projects

Fellowship test prompts: <https://github.com/sushmaanandakoju/fellowship-test-prompts>
NER / OCR (slave-trade volumes): <https://github.com/sushmaanandakoju/named-entity-text-extraction-ocr-slave-trade>
Polynomial equation parser: <https://github.com/sushmaanandakoju/polynomial-equation-parser>
Markov Logic Networks: <https://github.com/sushmaanandakoju/markov-logic-networks>
STAT 5010 final project: <https://github.com/sushmaanandakoju/stat-5010-final-project>
ATLS 5214 demo: <https://github.com/sushmaanandakoju/demo-ATLS5214>
Lean theorem proving: <https://github.com/sushmaanandakoju/lean-theorem-proving>

Website & Notes

Timeline: <https://sushmaanandakoju.github.io/timeline>
Representational Alignment notes: <https://sushmaanandakoju.github.io/representation-alignment-works/#/>
Human-AI Collaborated AI for Science: <https://sushmaanandakoju.github.io/human-ai-collaborated-ai4science/>
Teaching as Research (CIRTl / AZ): <https://tinyurl.com/tar-sushma-akoju>
X / Twitter: <https://x.com/sushmaanandakoju>