

# Arjun Chandrasekaran

COMPUTER VISION · NATURAL LANGUAGE PROCESSING · HUMAN BEHAVIOR · VIRTUAL HUMAN AVATARS

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## Education

### Georgia Tech

Atlanta, GA, USA

PHD IN COMPUTER SCIENCE (ADVISOR: DEVI PARIKH)

Jan. 2017 - Dec. 2019

**Dissertation:** Towards natural Human-AI interactions in Vision and Language

### Virginia Tech (transferred to Georgia Tech)

Blacksburg, VA, USA

PHD IN COMPUTER ENGINEERING (ADVISOR: DEVI PARIKH)

Aug. 2014 - Dec. 2016

- Research on computational models for visual humor and temporal common sense.

### Bangalore Institute of Technology

Bangalore, India

B. ENG. IN ELECTRONICS AND COMMUNICATION ENGINEERING

Sep. 2009 - Mar. 2013

- Design and implementation of a VLSI based video decoder based on the H.264 video encoding standard.

## Employment

### Max Planck Institute for Intelligent Systems

Tübingen, Germany.

POSTDOCTORAL RESEARCHER, WITH MICHAEL BLACK

Jan. 2020 - Now

- Modeling the semantics of human movement – human actions, interactions, and emotions.

### Robert Bosch (RBEI)

Bangalore, India

ASSOCIATE SOFTWARE ENGINEER, COMPUTER VISION TEAM

Aug. 2013 - July 2014

- Testing driver assistance functions like lane detection, road sign recognition, pedestrian detection, etc. on a camera ECU.

## Visiting Positions

### Indiana University

Bloomington, USA

VISITING SCHOLAR, WITH CHEN YU AND DAVID CRANDALL

Summer 2019

- Modeling child learning from parent-child interactions captured via head-mounted cameras and parent speech.

### CurAI

Palo Alto, USA

RESEARCH INTERN, WITH ANITHA KANNAN

Summer 2018

- Question Answering in medical domain and Information Extraction to build a Knowledge Graph.

### Facebook AI Research

Menlo Park, USA

RESEARCH INTERN, WITH DEVI PARIKH

Summer 2017

- Modeling aspects of personality from reddit data.

### Toyota Technological Institute

Chicago, USA

RESEARCH INTERN, WITH MOHIT BANSAL

Summer 2016

- Modeling “temporal common sense” in everyday events, and generating witty image captions.

### Sahyogee Tech Solutions

Bangalore, India

ENGINEERING INTERN, WITH ANAND UDUPA

Summer 2012

- Designing and testing analog circuits using the (then) newly developed Verilog AMS (Analog and Mixed Mode).

## Publications

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### How Much Coffee Was Consumed During EMNLP 2019? Fermi Problems: A New Reasoning Challenge for AI

EMNLP

CONFERENCE ON EMPIRICAL METHODS IN NATURAL LANGUAGE PROCESSING

Nov. 2021

A. Kalyan, A. Kumar, **A. Chandrasekaran**, A. Sabharwal, P. Clark

### BABEL: Bodies, Action and Behavior with English Labels

CVPR

IEEE/CVF CONFERENCE ON COMPUTER VISION AND PATTERN RECOGNITION

June 2021

A. R. Punnakkal\*, **A. Chandrasekaran**\*, N. Athanasiou, A. Quiros-Ramirez, M. J. Black

### Active domain adaptation via clustering uncertainty-weighted embeddings

ICCV

IEEE/CVF INTERNATIONAL CONFERENCE ON COMPUTER VISION

Oct. 2021

V. Prabhu, **A. Chandrasekaran**, K. Saenko, J. Hoffman

### A computational model of early word learning from the infant's point of view

CogSci

ANNUAL CONFERENCE OF THE COGNITIVE SCIENCE SOCIETY

July 2020

S. Tsutsui, **A. Chandrasekaran**, M. A. Reza, D. Crandall, C. Yu

### Do explanation modalities make VQA models more predictable to a human?

EMNLP

CONFERENCE ON EMPIRICAL METHODS IN NATURAL LANGUAGE PROCESSING

Nov. 2018

**A. Chandrasekaran**\*, V. Prabhu\*, D. Yadav\*, P. Chattopadhyay\*, D. Parikh

### Punny Captions: Witty Wordplay in Image Descriptions

NAACL

NORTH AMERICAN CHAPTER OF THE ASSOCIATION FOR COMPUTATIONAL LINGUISTICS

June 2018

**A. Chandrasekaran**, D. Parikh, M. Bansal

### Evaluating Visual Conversational Agents via Cooperative Human-AI Games

HCOMP

CONFERENCE ON HUMAN COMPUTATION AND CROWDSOURCING

Oct. 2017

P. Chattopadhyay, D. Yadav, V. Prabhu, **A. Chandrasekaran**, A. Das, S. Lee, D. Batra, D. Parikh

### SortStory: Sorting Jumbled Images and Captions into Stories

EMNLP

EMPIRICAL METHODS IN NATURAL LANGUAGE PROCESSING

Nov. 2016

H. Agrawal\*, **A. Chandrasekaran**\*, D. Batra, D. Parikh, M. Bansal

### We Are Humor Beings: Understanding and Predicting Visual Humor

CVPR

IEEE CONFERENCE ON COMPUTER VISION AND PATTERN RECOGNITION

July 2016

**A. Chandrasekaran**, A. K. Vijayakumar, S. Antol, M. Bansal, D. Batra, C. L. Zitnick, D. Parikh

\* Denotes equal contribution.

## Preprints

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### LocATe: End-to-end Localization of Actions in 3D with Transformers

ARXIV

Mar. 2022

J. Sun, B. Zhou, M. J. Black, **A. Chandrasekaran**

### It takes Two to Tango: Towards Theory of AI's Mind

ARXIV

Apr. 2017

**A. Chandrasekaran**\*, D. Yadav\*, P. Chattopadhyay\*, V. Prabhu\*, D. Parikh

## Awards

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### REVIEWING

2021 **Outstanding reviewer**, Computer Vision and Pattern Recognition (CVPR).

Virtual conference

2018 **Outstanding reviewer**, Neural Information Processing Systems (NeurIPS).

Montreal, Canada

## Talks

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- ‘Grounding language in 3D human movement’, Amazon AWS (remote talk). 2022.
- ‘Grounding language in 3D human movement’, NEON, Samsung Research America (remote talk). 2022.
- ‘Computational Humor Meeting’ (Off-the-grid virtual meeting). 2022.
- ‘Talk & Talk’ seminar series at MPI for Intelligent Systems, Tübingen, Germany (remote talk). 2021.
- Mercedes-Daimler Research, Bangalore, India (remote talk). 2021.
- Perceiving Systems Dept. at MPI for Intelligent Systems, Tübingen, Germany. 2019.
- Dept. of Psychological and Brain Sciences, Indiana University, Bloomington, USA. 2019.
- Laboratory of Sensorimotor Research, National Institutes for Health (NIH), Bethesda, USA. 2019.
- Invited talk at the ‘Vision and Language’ course at Georgia Tech, Atlanta, USA. 2018.
- Institute for Critical Technology and Applied Science (ICTAS) seminar series at Virginia Tech, Blacksburg, USA. 2017.
- Mid-Atlantic Computer Vision (MACV) Workshop at Johns Hopkins University, Baltimore, USA. 2017.
- CVPR Spotlight talk (on Visual Humor) at Las Vegas, USA. 2016.

## Reviewing

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- **2022** CVPR, ICRA, ECCV, NeurIPS
- **2021** CVPR, NeurIPS, AAAI
- **2020** ICRA, CogSci
- **2019** ICML, NAACL, NCVPRIPG (India)
- **2018** CVPR, ICML
- **2017** CVPR, NIPS

## Advising

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### Current

- Darsh Kaushik. Intern (B. Tech. at NIT Silchar, India).
- Leyre Sánchez Viñuela. Intern (MA in Computational Linguistics at University of Tübingen).

### Past

- Jiankai Sun. Intern (MS at Chinese University of Hong Kong → PhD at Stanford University).
- Taylor McConnell. Intern (MA in Computational Linguistics at University of Tübingen → Data capture team at Perceiving Systems Dept., MPI for Intelligent Systems).
- Mayank Lunayach. Intern (B. Tech. at IIT Kanpur, India → MS at Georgia Tech).

## Teaching

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### CS 4476: Introduction to Computer Vision.

HEAD TEACHING ASSISTANT. INSTRUCTOR: DEVI PARIKH.

*Georgia Tech*

*Fall 2018*

### CS 8803: Computer Vision and Language

TEACHING ASSISTANT. INSTRUCTOR: DEVI PARIKH.

*Georgia Tech*

*Fall 2017*