Yiorgos (Georgios) Chochlakis

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RESEARCH STATEMENT

My research lies at the intersection of machine learning and human-centered computing, with a focus on complex subjective language tasks. I advocate for their centrality in AI research and study how large language models and multimodal systems grapple with them by examining bias in prior-to-posterior predictions, aggregation practices that obscure individual perspectives, the reasoning behind decisions, etc. These tasks are distinct from objective classification because they are shaped by cultural norms, personal experiences, and social context. My long-term goal is to develop AI systems that account for this subjectivity and reflect human diversity, in contrast to current Aristotelian-style approaches with verifiable rewards and objectively defined answers.

EDUCATION

University of Southern California (USC), Los Angeles, CA — Aug 2021 – Present
MSc & PhD in Computer Science — (Expected: Aug 2026)
  GPA: **4.0**/4.0 (9 courses), Advisor: Prof. Shri Narayanan

National Technical University of Athens (NTUA), Athens, Greece — Sep 2015 – Oct 2020
BSc & MEng in Electrical and Computer Engineering (5-year joint degree)
  GPA: **9.56**/10.0 (56 courses, 98th percentile), Thesis advisor: Prof. Alexandros Potamianos

RESEARCH EXPERIENCE

Graduate Research Assistant, SAIL, USC, Los Angeles, CA — Aug 2021 – Present
- Researching LLM handling of subjective tasks, focusing on bias, aggregation, and error correction
- Mentoring undergrads & masters to graduation and publications with 5 alumni and 4 current
- Discovered the interference of language modeling in classification in LLMs (Main EMNLP 2025)
- Initiated project on exploiting LLM biases to perform labeling error correction (Main EMNLP 2025)
- Exposed how subjective label aggregation obscures individual perspectives (Main NAACL 2025)
- Designed and executed studies on how LLMs prefer their own subjective priors over human opinions (ACII 2024 & ICASSP 2025), revealing a systematic bias in in-context learning and CoT prompting

Undergraduate Research Assistant, SLP group, NTUA, Greece — Mar 2020 – Nov 2020
- Advanced methods under limited supervision with visual zero-shot SOTA system in 2 settings.

Research Intern, IIT, NCSR Demokritos, Greece — Oct 2019 – Jun 2020
- Published on surface reconstruction from satellite & drone imagery with low-cost deep learning infra

ACADEMIC PROJECTS

USC-Capital One CREDIF award, USC, Los Angeles, CA — Jan 2025 – Present
- Led grant proposal and crafted in-person presentation slides for the grant committee
- Proposed and led annotation pipeline, scraped 4k+ video ads, organized focus groups
- Developing multimodal LLMs to distinguish between affect and reason in human decisions

LAPD Everyday Respect, LAPD & USC, Los Angeles, CA — Dec 2022 – Present
- Acquired 30k body-worn videos from LAPD, curating a separate open dataset for benchmarking
- Developed AI-enhanced private annotation pipeline for lower-cost annotations w/o privacy concerns
- Building multimodal models to measure and improve police communication in traffic stops

DARPA INCAS, USC & IndianaU & Notre Dame & UI Chicago, US — Sep 2021 – Dec 2024
- Led strategy on emotions; defined taxonomy as indicator to detect social media influence campaigns
- Engineered SOTA multilingual emotion recognition models with 6.5% IoU gains (2x ICASSP 2023)
- Dockerized to deploy at scale; performed 6M+ inferences within a day, in multiple evaluations
- Integrated with team's indicator system; achieved 0.7+ AUC campaign detection goal by Phase 2/3

Professional Experience

Applied Science Intern, Amazon Web Services, Bellevue, WA   May 2024 – Aug 2024
- Proposed SOTA unified audio-textual model for missing modalities, with accuracy gains of up to 2.2% in all settings on MSP-Podcast, enabling efficient model compiling and deployment (IS 2025)

Applied Science Intern, Amazon Web Services, Santa Clara, CA   May 2023 – Aug 2023
- Innovated video representation learning methods for partially missing modalities, outperforming baselines by up to 5.6% in 10/12 cases, improving reliability in real-world noisy scenarios (IS 2024)

Machine Learning Engineer, Behavioral Signals, Los Angeles, CA   Dec 2020 – Jul 2021
- Built constrained optimization for call-center speaker ID/diarization, achieving 90%+ accuracy

Machine Learning Intern, SCiO, Lefkippos Attica Technology Park, Greece   07/2019 – 08/2019
Built dataset with relevant features and a forecast model for rice cultivation in India

Talks

Capital One Offsite Meeting   Mar 2025
[Invited Talk] LLM Struggles with Subjective Reasoning
- Discussed past work, focusing on defining "complex subjective tasks" and LLM biases in them
- Analyzed proposal for USC-Capital One CREDIF research award

ISI Artificial Intelligence Seminar   Nov 2024
[Invited Talk] Bigger isn't Always Better: Why LLMs Struggle with Subjective Reasoning
- Discussed recent publications, with an emphasis on model scale and performance in subjective tasks

ACII Oral Presentation   Sep 2024
The Strong Pull of Prior Knowledge in LLMs and Its Impact on Emotion Recognition
- Presented my published paper in front of an academic crowd

IEEE K-12 Outreach Program at USC   Nov 2022
Introduction to Signal Processing & Interpretation and Emotional Response to Music
- Led organization of talks and workshops for the lab to high-school students
- Introduced high-school students to signal processing, with an emphasis on music
- Organized game to show subjectivity of emotional responses to music in different cultures

IEEE K-12 Outreach Program at USC   Apr 2022
Introduction to Signal Processing & Interpretation and Emotional Response to Music
- Introduced high-school students to signal processing, with an emphasis on music
- Organized game to show subjectivity of emotional responses to music in different cultures

Academic Service

Reviewing: NeurIPS 2022-2025, ICASSP 2023-2025, CHI 2025, ARR May 2025

Teaching: PhD Mentor at Google ExploreCSR at USC for Spring 2023, CSCI 360 TA for Fall 2025

Community Leadership: Led reading group with ≥ 10 regular attendees, with speakers across USC Viterbi

Professional Membership: IEEE member, ACL member

Honors & Awards

PhD Fellowship from Capital One	Jan 2025 - Dec 2025
PhD Scholarship from Gerondelis Foundation	Aug 2023 - May 2024
Top Reviewer Honor & Registration Grant from NeurIPS	Sep 2022
Highest GPA in school of ECE from Thomaidis Foundation	Oct 2019 - Sep 2020
Publication Award from Thomaidis Foundation	Jun 2020

PUBLICATIONS (SELECTED)

- M. Ma[*], **G. Chochlakis**[*], N. M. Pandiyan, J. Thomason, S. Narayanan. **"Large Language Models Do Multi-Label Classification Differently."** Main Proceedings of EMNLP, 2025. ([*] denotes equal contribution)

- **G. Chochlakis**, P. Wu, A. Bedi, M. Ma, K. Lerman, S. Narayanan. **"Humans Hallucinate Too: Language Models Identify and Correct Subjective Annotation Errors with Label-in-a-Haystack Prompts."** Main Proceedings of EMNLP, 2025.

- **G. Chochlakis**, T. Iqbal, W. H. Kang, Z. Huang. **"Modality-Agnostic Multimodal Emotion Recognition using a Contrastive Masked Autoencoder."** Interspeech 2025.

- **G. Chochlakis**, A. Potamianos, K. Lerman, S. Narayanan. **"Aggregation Artifacts in Subjective Tasks Collapse Large Language Models' Posteriors."** Proceedings of NAACL, 2025.

- **G. Chochlakis**, N. M. Pandiyan, K. Lerman, S. Narayanan. **"Larger Language Models Don't Care How You Think: Why Chain-of-Thought Prompting Fails in Subjective Tasks."** ICASSP, 2025.

- **G. Chochlakis**, A. Potamianos, K. Lerman, S. Narayanan. **"The Strong Pull of Prior Knowledge in Large Language Models and Its Impact on Emotion Recognition."** ACII, 2024.

- **G. Chochlakis**, C. Lavania, P. Mathur, K. Han. **"Tackling missing modalities in audio-visual representation learning using masked autoencoders"**. Interspeech 2024.

- K. Burghardt, A. Rao, S. Guo, Z. He, **G. Chochlakis**, S. Baruah, A. Rojecki, S. Narayanan, K. Lerman. **"Socio-Linguistic Characteristics of Coordinated Inauthentic Accounts."** ICWSM 2024.

- **G. Chochlakis**, G. Mahajan, S. Baruah, K. Burghardt, K. Lerman, S. Narayanan. **"Using Emotion Embeddings to Transfer Knowledge Between Emotions, Languages, and Annotation Formats."** ICASSP, 2023.

- **G. Chochlakis**, G. Mahajan, S. Baruah, K. Burghardt, K. Lerman, S. Narayanan. **"Leveraging Label Correlations in a Multi-label Setting: A Case Study in Emotion."** ICASSP, 2023.

- T. Srinivasan, T.-Y. Chang, L. Pinto Alva, **G. Chochlakis**, M. Rostami, J. Thomason. **"CLiMB: A Continual Learning Benchmark for Vision-and-Language Tasks."** NeurIPS (Datasets & Benchmarks), 2022.