OANA IGNAT

Passionate about research, mentorship, and social good impact

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PROFESSIONAL POSITIONS

Assistant Professor of Computer Science and Engineering

Santa Clara University, Santa Clara, USA

09/2024 - Ongoing

- ⬦ Research on **multimodal inclusive AI models and datasets for social good impact**
- ⬦ Teaching Artificial Intelligence (CSEN 266) and Data Structures and Algorithms (CSEN 12)
- ⬦ Co-organizer of the "ACL Year Round Mentorship" global panel sessions
- ⬦ Collaborating with Miller Center and Frugal Innovation Hub on AI solutions

Postdoctoral Fellow in Computer Science

University of Michigan, Ann Arbor, USA

02/2023 - 08/2024

- ⬦ Member Language and Information Technologies (LIT) Lab
- ⬦ CO-PI Global Health Equity Grant
- ⬦ Mentor Undergraduate, Masters and Ph.D. students on multimodal research projects
- ⬦ Organizer of AI exhibition at Michigan Science Center (Mi-Sci)

EDUCATION

Ph.D. Computer Science

University of Michigan, Ann Arbor, USA

09/2017 - 08/2022

- ⬦ Towards Human Action Understanding in Social Media Videos using Multimodal Models
- ⬦ Multimodal research (language & vision), with focus on **human action understanding**
- ⬦ Member of Language and Information Technologies (LIT) Lab, advised by Rada Mihalcea

B.S. Computer Science

Babeș-Bolyai University, Cluj Napoca, Romania

10/2013 – 07/2016

- ⬦ Collaborated with Robert-Bosch for my **undergraduate thesis** on real-time, automatic road detection using depth information from a stereo camera, which won multiple prizes and was successfully applied in the real world
- ⬦ Won the **Best Thesis award in Artificial Intelligence** for the entire class of 2016 undergraduate and graduate students

AWARDS

- ⬦ **Best Resource Paper Award** in the 2025 Annual Conference of the Association for Computational Linguistics (ACL 2025)

- ◇ **Best Task Award** in the 19th Workshop on Semantic Evaluation (Semeval-2025) at the Annual Conference of the Association for Computational Linguistics (ACL 2025)

- ◇ **Best Paper Award** in the Third Workshop on Cross-Cultural Considerations in NLP (C3NLP) at Nations of the Americas Chapter of Association for Computational Linguistics (NAACL 2025)

- ◇ **Project Grant Award** by the HPC Center's Catalytic Project-Based Grant program supported by the Fletcher Jones Foundation at SCU 2025

- ◇ **JEDI Scholarship Award** by the Office of the Provost at SCU 2025

- ◇ **Best Poster Award** in Eastern European Machine Learning Summer School (EEML 2019)

- ◇ **Fulbright Student Award** Finalist 2017

- ◇ **Best Thesis Award in Artificial Intelligence** for the entire class of 2016 undergraduate and graduate students at the "Babes-Bolyai" University. Awarded by the **Romanian Institute of Science and Technology**

- ◇ "Scientific Communication Sessions for Students", for the entire class of 2016 undergraduate and graduate students – 2nd place for presenting my undergraduate thesis

- ◇ 2016 Jane Street "Women in STEM" Finalist, selected from 300+ participants across Europe

- ◇ Over the years, I took part in **over 60 Mathematics competitions**, such as:
    - ◇ National competition in Mathematics "Euclid" 2013 – 1st prize
    - ◇ National Olympiad in Mathematics 2012
    - ◇ Regional Mathematics Olympiad 2012 – 1st place
    - ◇ Regional Mathematics Olympiad 2011 – 2nd place
    - ◇ National competition in Mathematics "Euclid" 2011 – 2nd prize
    - ◇ Regional Mathematics Olympiad 2010 – mention
    - ◇ Regional Mathematics Olympiad 2009 – 2nd place

INVITED TALKS

- ◇ **University of Michigan Sci-MI Ethics Summer School**, *Towards Language-Vision Models for Positive Societal Impact*, Guest Lecture, July 2025.

- ◇ **Santa Clara University CSEN Seminar**, *Towards AI For Everyone, With Everyone, By Everyone*, Guest Lecture, April 2025.

- ◇ **University of Pittsburgh**, *Towards Inclusive Representations in Language-Vision Models*, Guest Lecture, October 2024.

- ◇ **Cohere for AI**, *Has It All Been Solved? Open NLP Research Questions Not Solved by Large Language Models*, Online Guest, August 2024.

- ◇ **MIT University**, *Towards Inclusive Representations in Language-Vision Models*, Guest Lecture, July 2024.

- ◇ **ETH Zurich**, *Towards Language-Vision Models for Positive Societal Impact*, Guest Lecture, February 2024.

- ◇ **Villanova University**, *Bridging the Digital Divide: Performance Variation across Socio-Economic Factors in Vision-Language Models*, CS for Good Guest Lecture, February 2024.

- ◇ **University of Michigan**, *Towards Language-Vision Models for Positive Societal Impact*, Guest Lecture, January 2024.

- ◇ **University of Michigan CSE DEI Discussions**, *Launch your Confidence, a biweekly workshop*

for CSE students, Michigan, October 2023.

⋄ **University of Illinois Urbana-Champaign**, *OCR improves Machine Translation performance for low-resource languages*, OCR Research Brownbag discussions, October 2023.

⋄ **Oakland University**, *Human actions understanding using language and visual information*, NLP Guest Lecture, March 2023.

⋄ **NLP Meetup in Ann Arbor**, *Human actions understanding from social media videos*, 2019.

SELECTED PUBLICATIONS

1. Shamsuddeen H. Muhammad, Nedjma Ousidhoum,.., **Oana Ignat**, ..., Saif M. Mohammad, *BRIGHTER: BRIdging the Gap in Human-Annotated Textual Emotion Recognition*, Association for Computational Linguistics (ACL 2025), Best Resource Paper Award, https://arxiv.org/pdf/2502.11926

2. Shamsuddeen H. Muhammad, Nedjma Ousidhoum,.., **Oana Ignat**, ..., Saif M. Mohammad, *SemEval-2025 task 11: Bridging the gap in text-based emotion detection*, The 19th Workshop on Semantic Evaluation (Semeval-2025) at the Annual Conference of the Association for Computational Linguistics (ACL 2025), Best Task Award, https://arxiv.org/pdf/2503.07269?

3. **Oana Ignat**[*], Gayathri GI[*&], Rada Mihalcea, *Detecting Inspiring content on Social Media across Cultures*, Proceedings of the Third Workshop on Cross-Cultural Considerations in NLP (C3NLP), Nations of the Americas Chapter of the Association for Computational Linguistics (NAACL 2025), Best Paper Award, https://arxiv.org/pdf/2404.12933

4. Longju Bai[*&], Angana Borah[*], **Oana Ignat**[*], and Rada Mihalcea, *The Power of Many: Multi-Agent Multimodal Models for Cultural Image Captioning*, Nations of the Americas Chapter of the Association for Computational Linguistics (NAACL 2025), https://arxiv.org/pdf/2411.11758.

5. Joan Nwatu[&], **Oana Ignat**, and Rada Mihalcea, *Uplifting Lower-Income Data: Strategies for Socioeconomic Perspective Shifts in Large Multi-modal Models*, Nations of the Americas Chapter of the Association for Computational Linguistics (NAACL 2025), https://arxiv.org/pdf/2407.02623.

6. **Oana Ignat**, Phoebe Xu[&], and Rada Mihalcea, *MAiDE-up: Multilingual Deception Detection of GPT-generated Hotel Reviews*, Nations of the Americas Chapter of the Association for Computational Linguistics (NAACL 2025), https://arxiv.org/pdf/2404.12938.

7. Rada Mihalcea[*], **Oana Ignat**[*], Longju Bai[&], Angana Borah, Luis Chiruzzo, Zhijing Jin, Claude Kwizera, Joan Nwatu[*&], Soujanya Poria, and Thamar Solorio *Why AI Is WEIRD and Shouldn't Be This Way: Towards AI For Everyone, With Everyone, By Everyone*, AAAI Conference on Artificial Intelligence, February 2025, arxiv.org/pdf/2410.16315

8. Daryna Dementieva, **Oana Ignat**, Zhijing Jin, Rada Mihalcea, Giorgio Piatti, Joel Tetreault, Steven Wilson, Jieyu Zhao, *Proceedings of the Third Workshop on NLP for Positive Impact*, Association for Computational Linguistics (ACL 2024), November 2024, https://aclanthology.org/2024.nlp4pi-1.0

9. David Romero[*], Chenyang Lyu[*], Haryo Akbarianto Wibowo[*], ..., **Oana Ignat**, Joan Nwatu[&], Rada Mihalcea, Thamar Solorio, Alham Fikri Aji, *CVQA: Culturally-diverse Multilingual Visual Question Answering Benchmark*, Advances in Neural Information Processing Systems, NeurIPS (NeurIPS 2024, December 2024, https://arxiv.org/pdf/2406.05967

10. **Oana Ignat**, Santiago Castro, Weiji Li[&], and Rada Mihalcea, *Human Action Co-occurrence in Lifestyle Vlogs using Graph Link Prediction*, 7th Workshop on Graph-based Natural Language Processing (TextGraphs 2024), https://arxiv.org/pdf/2309.06219.pdf.

11. **Oana Ignat**, *Towards Human Action Understanding in Social Media Videos using Multimodal Models*, **Ph.D. Thesis**, August 2022, https://deepblue.lib.umich.edu/handle/2027.42/174613.

12. **Oana Ignat**, Longju Bai[&], Joan Nwatu[&], and Rada Mihalcea, *Annotations on a Budget: Lever-*

aging Geo-Data Similarity to Balance Model Performance and Annotation Cost, The 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING 2024), May 2024, https://arxiv.org/pdf/2403.07687.pdf[1].

13. **Oana Ignat***, Zhijing Jin*, Artem Abzaliev, Laura Biester, .., Rada Mihalcea, *Has It All Been Solved? Open NLP Research Questions Not Solved by Large Language Models*, The 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING 2024), May 2024, https://arxiv.org/pdf/2305.12544.pdf.

14. Shinka Mori[&], **Oana Ignat**, Andrew Lee, and Rada Mihalcea, *Towards Algorithmic Fidelity: Mental Health Representation across Demographics in GPT-generated vs. Human-generated Data*, The 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING 2024), May 2024, https://arxiv.org/pdf/2403.16909.pdf.

15. **Oana Ignat**, Jingru Yi, Burak Uzkent, and Linda Liu, *Augment the Pairs: Semantics-Preserving Image-Caption Pair Augmentation for Grounding-Based Vision and Language Models*, IEEE/CVF Winter Conference on Applications of Computer Vision Workshops (WACV 2024), October 2023, https://arxiv.org/pdf/2311.02536.pdf.

16. Joan Nwatu*[&], **Oana Ignat*** and Rada Mihalcea, *Bridging the Digital Divide: Performance Variation across Socio-Economic Factors in Vision-Language Models*, The 2023 Conference on Empirical Methods in Natural Language Processing (EMNLP 2023), October 2023, https://arxiv.org/pdf/2311.05746.pdf.

17. Santiago Castro*, **Oana Ignat*** and Rada Mihalcea, *Scalable Performance Analysis for Vision-Language Models*, Annual Meeting of the Association for Computational Linguistics (*SEM 2023), July 2023, https://arxiv.org/pdf/2305.18786.pdf.

18. Santiago Castro, Ruoyao Wang, Pingxuan Huang, Ian Stewart, **Oana Ignat**, Nan Liu, Jonathan C. Stroud, and Rada Mihalcea, *FIBER: Fill-in-the-Blanks as a Challenging Video Understanding Evaluation Framework*, Annual Meeting of the Association for Computational Linguistics (ACL 2022), October 2022, https://arxiv.org/pdf/2104.04182.pdf.

19. **Oana Ignat**, Jean Maillard, Vishrav Chaudhary and Francisco Guzmán, *OCR Improves Machine Translation for Low-Resource Languages*, Annual Meeting of the Association for Computational Linguistics (ACL 2022), October 2022, https://arxiv.org/pdf/2202.13274.pdf.

20. **Oana Ignat**, Santiago Castro, Hanwen Miao[&], Weiji Li[&], and Rada Mihalces, *WhyAct: Identifying Action Reasons in Lifestyle Vlogs*, The 2021 Conference on Empirical Methods in Natural Language Processing (EMNLP 2021), https://arxiv.org/pdf/2109.02747.pdf.

21. **Oana Ignat**, Santiago Castro, Yuhang Zhou[&], Jiajun Bao[&], Dandan Shan, and Rada Mihalcea,*When did it happen? Duration-informed Temporal Localization of Narrated Actions in Vlogs*, ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM 2021), October 2021, https://arxiv.org/pdf/2202.00813.pdf.

22. **Oana Ignat**, Y-Lan Boureau, Jane A. Yu, and Alon Halevy, *Detecting Inspiring Content on Social Media*, 9th International Conference on Affective Computing and Intelligent Interaction (ACII 2021), August 2021, https://arxiv.org/pdf/2109.02734.pdf.

23. **Oana Ignat**, Laura Burdick, Jia Deng, and Rada Mihalcea, *Identifying Visible Actions in Lifestyle Vlogs*, Annual Meeting of the Association for Computational Linguistics (ACL 2019), July 2019, https://arxiv.org/pdf/1906.04236.pdf.

24. Laura Burdick, **Oana Ignat**, Yiming Zhang, Mingzhe Wang, Steve Wilson, Yumou Wei, Jia Deng, and Rada Mihalcea, *Building a Flexible Knowledge Graph to Capture Real-World Events*, Text Analysis Conference (TAC 2019), November 2019, https://tac.nist.gov/publications/2019/participant.papers/TAC2019.michigan.proceedings.pdf.

25. **Oana Ignat** and Cosmin Lazar, *Disparity image segmentation for free-space detection*, IEEE 12th

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[1]* – equal contribution, [&] – my mentee

International Conference on Intelligent Communication Processing (ICCP 2016), August 2016, https://ieeexplore.ieee.org/document/7737150/.

PAPERS UNDER SUBMISSION

26. Antonia Karamolegkou, Angana Borah, .., **Oana Ignat**, .., Daryna Dementieva, *Nlp for social good: A survey of challenges, opportunities, and responsible deployment*, https://arxiv.org/pdf/2505.22327

27. Parth Bhalerao, Mounika Yalamarty, Brian Trinh, **Oana Ignat**, *Multi-Agent Multimodal Models for Multicultural Text to Image Generation*, https://arxiv.org/pdf/2502.15972

28. Parth Bhalerao, **Oana Ignat**, *Mentorship for All: Multi-Agent Multilingual Long-Form Video Question Answering for Mentorship Applications*, https://arxiv.org/pdf/2502.15972

TEACHING ACTIVITIES

Primary Instructor
Data Structures and Algorithms (CSEN 12)
01/2025 - Ongoing

Artificial Intelligence (CSEN 266)
09/2024 - Ongoing

Discover CS (EECS 198)
09/2021 - 12/2021

 ⋄ Taught an intro to CS course **designed for underrepresented minorities** in CS.

Engineering Teaching Consultant
Center for Research on Learning and Teaching in Engineering (CRLT-Engin)
09/2020 - 05/2021

 ⋄ Helped other GSIs/IAs to **improve their teaching** through one-on-one consultations where we discussed challenges they faced during teaching. I also collected feedback from students of the GSIs/IAs and discussed it with the student instructor.

Graduate Student Instructor
Data Structures and Algorithms (EECS 281)
09/2020 - 12/2020

 ⋄ 1000+ students, 30 GSIs, 3 professors
 ⋄ Coordinated with the other GSIs for office hours, grading, and proctoring exams.

Data Mining (EECS 476)
01/2020 - 05/2020

 ⋄ 50+ students, 3 GSIs, 1 professor
 ⋄ Designed assignments and exams, taught discussion sessions, held office hours, graded and proctored exams.

Instructor: NLP for Social Good
Artificial Intelligence for All (AI4All) Summer School
07/2019

◇ Introduced **underrepresented minority high school students** to AI by teaching them how to code in Python and implement an **NLP project related to social good**: work with HappyDB dataset to predict what makes people happy.

SERVICE AND VOLUNTEERING

Area Chair
ACL Rolling Review
05/2025 - Ongoing

◇ Area: Multimodality and Language Grounding to Vision, Robotics, and Beyond

EMNLP
07/2023 - 09/2023

◇ Area: Large Language Models and the Future of NLP

Reviewer
ACL Rolling Review
12/2021 - Ongoing

◇ Review research papers on Multimodal (NLP and Computer Vision) and AI for social good.

Transactions of the Association for Computational Linguistics (TACL)
06/2025 - Ongoing
International Conference on Computational Linguistics (COLING)
10/2024 - Ongoing
International Conference on Computational Imaging (ICCP)
10/2023

Eastern European Machine Learning Summer School (EEML)
04/2023

◇ Reviewed research applications from 20 students applying to participate in the Eastern European Machine Learning Summer School (EEML).

Organizer
2x NLP for Positive Impact (NLP4PI) Workshop @ACL @EMNLP
06/2025, 11/2024

Scaling Up Multilingual & Multi-Cultural Evaluation (SUMEval) Workshop @COLING
01/2025

ACL Year Round Mentorship
05/2023 - Ongoing

◇ Co-moderator for the "ACL Year Round Mentorship" global panel sessions, help reach out to mentors, answer question, and promote the events on social media platforms. Our mentorship sessions are recorded and open access and are well received by the global NLP community, with **the most popular videos reaching up to 2,500 views**.

University NLP@Michigan Days
04/2023

◇ Co-Chair of the NLP@Michigan Symposium, 2023 (100+ attendees).

Michigan Science Center in Detroit

09/2023 - 10/2024

◇ Co-organize and create an AI Museum Exhibition to **demystify AI for a broad audience** by explaining what it is, its current capabilities, and the importance of data in AI models. We create engaging educational materials using games and puzzles that people of all ages can enjoy and aim to **inspire generations of underrepresented students to pursue careers in AI and CS**.

University of Michigan: Confidence Workshops

05/2023 - 05/2024

◇ Organize "Launch your Confidence", a bi-weekly workshop with activities inspired by Improv Theater and Toastmasters, on **reducing perfectionism, tackling impostor syndrome**, and **improving public speaking skills**. The workshop succeeded in popularity and involvement, with 10-15 Ph.D. and Masters student attendees biweekly, mainly from CS minority groups.

University of Michigan: NLP Reading Group

08/2019 - 08/2022

◇ Weekly NLP reading groups for the University of Michigan students from the CSE, EECS and School of Information (SI).

Advisor/ Mentor

Santa Clara University

09/2024 - Ongoing

◇ Advising Ph.D. and Master's students on AI research projects

University of Michigan

09/2020 - 09/2024

◇ Mentored and published research papers with 10 undergraduate, Master, and Ph.D. students.
   Undergraduate:
     ◇ Phoebe Xu (2023 - 2024) (currently Master at UBC)
     ◇ Gayathri GI (2023 - 2024) (currently Master at CMU)
     ◇ Weiji Li (2021 - 2022) (currently ML Engineer at Tesla)
     ◇ Jiajun Bao (2020 - 2021) (currently ML Engineer at Apple)
     ◇ Yuhang Zhou (2020 - 2021) (currently Ph.D. candidate at University of Maryland)
   Master's:
     ◇ Shinka Mori (2023 - 2024) (currently ML Engineer)
     ◇ Longju Bai (2023 - 2025) (currently Ph.D. University of Michigan)
     ◇ Aylin Gunal (2023 - 2024) (currently ML Engineer)
     ◇ Hanwen Miao (2021 - 2022) (currently ML Engineer)
   Ph.D.:
     ◇ Joan Nwatu (2023 - 2025)

Michigan Islamic Academy's Senior Project

09/2019 - 11/2019

- ◇ Biweekly meetings with a senior student to guide her through her final NLP project, a project about **increasing diversity representation in mental health**.

Panelist

C3NLP: Cross Cultural Considerations in NLP

05/2025

- ◇ Challenges and future directions for Cross-Cultural NLP.

Ann Arbor District Library: Friday Night AI

06/2024

- ◇ AI and the Future of Creative Expressions.

University of Michigan: EECS 280

11/2023

- ◇ Answered questions from students in EECS 280 (1000+ undergrads) about my path in CS.

University of Michigan: Explore CS Research

02/2023

- ◇ Answered questions about research in AI from CS undergraduate and Master students. Inspired by this event, Phoebe Xu, an undergraduate student, decided to try research and work with me. After working together for a few months, she applied for a Ph.D. in NLP.

University of Michigan: Discover CS

03/2023

- ◇ Answered questions about a career in CS, AI, and research from undergraduate students.

INDUSTRY EXPERIENCE

Research Intern

Amazon, Prime Video

09/2022 - 12/2022   ♥ Seattle

- ◇ Mentored by Jingru Yu and Burak Uzkent
- ◇ Significantly improved the performance of a state-of-the-art image-phrase grounding model using a novel, semantics-preserving data augmentation technique.

Meta, Fundamental AI Research (FAIR)

05/2021 - 08/2021   ♥ Remote

- ◇ Mentored by Paco Guzman
- ◇ Analyzed OCR errors for low-resource languages and their impact on MT performance and created an OCR benchmark for 60 low-resource languages.

Meta Fundamental AI Research (FAIR)

05/2020 - 08/2020   ♥ Remote

- ◇ Mentored by Alon Halevy and Y-Lan Boureau
- ◇ Detected Inspiring Content on Social Media (Reddit and Facebook posts).

Image Processing Engineer
Telenav Software
08/2016 - 08/2017   📍 Cluj Napoca, Romania

⬦ 3D reconstruction of scenes using structure from motion.

Intern Image Processing Engineer
Robert-Bosch SRL
07/2015 – 08/2016   📍 Cluj Napoca, Romania

⬦ Novel road detection algorithm using a stereo-camera.

CONFERENCES ATTENDED

ACL: Annual Meeting of the Association for Computational Linguistics	📅 2019-2025
EMNLP: Empirical Methods in Natural Language Processing	📅 2021, 2024
NAACL: North American Chapter of the Association for Computational Linguistics	📅 2019, 2025
COLING: International Conference on Computational Linguistics	📅 2018, 2024
EEML: Eastern European Machine Learning Summer School	📅 2019
MSLD: Midwest Speech and Language Days	📅 2017-2019

CRLT-ENGIN TEACHING WORKSHOPS

Designing and Facilitating Group Work in Remote Courses

It's Time for Action: Generating an Active Learning Plan

The Science of Learning

How Stereotype Threat, Impostor Syndrome, and Growth Mindset Affect Student Learning

Writing and Grading Multiple Choice Exams: An Online Workshop

UNIVERSITY GRADUATE COURSEWORK

ELI 621: Dissertation and Publication Writing

EECS 692: Advanced Artificial Intelligence

EECS 592: Foundations of Artificial Intelligence

EECS 551: Matrix Methods for Signal Processing

EECS 595: Natural Language Processing

EECS 542: Advanced Topics in Computer Vision

LANGUAGES

Fluent in spoken/written Romanian, English; Beginner: Spanish, French, German

Oana Ignat