## **Ana-Maria Bucur**

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Research Interests
Mental Health Applications, Human-Centered AI, Natural Language Processing, Information Retrieval, Conversational Systems, Large Language Models
Education

Oct 2020 - Present Ph.D. Student at Interdisciplinary School of Doctoral Studies, University of Bucharest, Romania. PhD in cotutelle with Universitat Politècnica de València, Spain

Together with my supervisors, prof. **Liviu P. Dinu** and prof. **Paolo Rosso**, and psychology researchers, we study the problem of mental disorders detection from social media data, using computational linguistics and state-of-the-art deep learning methods.

Oct 2017 - Jun 2020 University of Bucharest, Faculty of Mathematics and Informatics Master's degree in Artificial Intelligence

Dissertation thesis "A Computational Approach to Early Onset Detection of Depression from Social Media Text", supervisor prof. **Liviu P. Dinu**. Contributions:

- Made a comprehensive literature review of the existing research.
- Explored different approaches based on hand-crafted features and topic modelling and obtained competitive results with state-of-the-art for early detection of depression.

Oct 2014 - Jun 2017 University of Bucharest, Faculty of Mathematics and Informatics Bachelor's Degree in Computer Science

Professional Experience	

Dec 2024 - Present Research Assistant at Università della Svizzera Italiana, Switzerland As part of the Dalle Molle Institute for Artificial Intelligence Studies.

Oct 2024 - Feb 2025 Teaching Assistant at University of Bucharest, Romania Teaching laboratories for the "LLMs & Cognition" Course

July - Dec 2023 Researcher at Pattern Recognition and Human Language Technology Center, Universitat Politècnica de València, Spain

Worked on two projects: one on depression detection from social media videos; and the second one on analyzing false online advertising targeted towards corporate entities.

May - June 2023 Research Intern at Conversational Al and Social Analytics (CAISA) Lab,
Philipps-Universität Marburg, Germany, under the supervision of Lucie Flek

Worked on analyzing how happy moments interplay with emotions in individuals with depression employing Dynamic Systems Theory.

Mar 2022 - April 2023 Researcher at Pattern Recognition and Human Language Technology Center, Universitat Politècnica de València, Spain

Worked on depression detection from multimodal social media content, including images and text data.

#### Oct 2021 - Feb 2022 Research Assistant at University of Bucharest, Romania

Worked within the aiCARE Project - An Artificial Intelligence-powered Conversational Therapeutic Agent for Anxiety and Depression in Young Adult Cancer Survivors, PN-III-P1-1.1-TE-2019-2140.

#### Research Assistant at West University of Timișoara, Romania May 2021 - Feb 2022

Worked within DACRE Project - Discipline-Specific Expert Academic Writing in Romanian and English: Corpus-Based Contrastive Analysis Models, PN-III-P4-ID-PCE-2020-0821.

## Oct 2021 - June 2022 Teaching Assistant at University of Bucharest, Romania

Taught laboratories for "Machine Translation", "Foundations of Natural Language Processing", and "Introduction to Natural Language Processing" Courses.

## Selected Publications

## IEEE Journal of Biomedical and Health Informatics, 2025 On the State of NLP Approaches to

Modeling Depression in Social Media: A Post-COVID-19 Outlook Ana-Maria Bucur, Andreea-Codrina Moldovan, Krutika Parvatikar, Marcos Zampieri, Ashiqur R. KhudaBukhsh, Liviu P. Dinu

### **NAACL 2025**

Datasets for Depression Modeling in Social Media: An Overview (CLPsych Workshop) Ana-Maria Bucur, Andreea-Codrina Moldovan, Krutika Parvatikar, Marcos Zampieri, Ashigur R. KhudaBukhsh, Liviu P. Dinu

## IEEE Transactions on Affective Computing, 2025 The Expression of Happiness in Social Media of

Individuals Reporting Depression, Ana-Maria Bucur, Berta Chulvi, Adrian

Cosma, Paolo Rosso

### LREC-COLING 2024

MentalHelp: A Multi-Task Dataset for Mental Health in Social Media Nishat Raihan, Sadiya Sayara Chowdhury Puspo, Shafkat Farabi, Ana-Maria Bucur, Tharindu Ranasinghe, Marcos Zampieri

#### **ECIR 2024**

Reading Between the Frames: Multi-Modal Depression Detection in Videos from Non-Verbal Cues, David Gimeno-Gómez, Ana-Maria Bucur, Adrian Cosma, and Paolo Rosso

## Frontiers in Psychology Journal, 2023 Mental health at different stages of cancer survival: A

natural language processing study of Reddit posts, loana R. Podina, Ana-Maria Bucur, Diana Todea, Liviu Andrei Fodor, Andreea Iuliana Luca, Liviu P. Dinu, Rares Boian

#### **ECIR 2023**

It's Just a Matter of Time: Detecting Depression with Time-Enriched Multimodal Transformers, Ana-Maria Bucur, Adrian Cosma, Paolo Rosso, Liviu P. Dinu

#### **LREC 2022**

Life is not Always Depressing: Exploring the Happy Moments of People Diagnosed with Depression, Ana-Maria Bucur, Adrian Cosma and Liviu P. Dinu

# **ACL-IJCNLP 2021**

(Findings)

An exploratory analysis of the relation between offensive language and

mental health, Ana-Maria Bucur, Marcos Zampieri and Liviu P. Dinu

#### Additional awards/activities

May 2025 Best poster award at the CLPsych Workshop, NAACL 2025

July 2022 Best poster award (popular vote) at VII Encuentro de Estudiantes de Doctorado, Universitat Politècnica de València

### Mar 2021 Silver Award at E-Mental Health Hackathon for TherAmi app

Together with my team, we worked on developing a therapy management application that uses Al algorithms to transcribe conversations and take notes automatically.