Anita Lilla **Verő**

SENIOR AI RESEAR ENGINEER, MANAGER, SINGER, WRITER.

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https://anitavero.github.io/

Summary

As a Senior Machine Learning Research Engineer, Manager, Musician and Writer, I relish blending my technical expertise with my creative pursuits. After years of reflection, I realised that my meaning lies in bringing the best out of human connections and communities. I pursue this mission in two ways. Firstly, by leveraging technology for positive impact and advocating for responsible development. Secondly, through leadership roles, I aim to cultivate a trust based work environment, and tap into people's intrinsic motivations. Moreover, I simply find people management and mentoring immensely fulfilling. I hold a PhD in Multimodal Natural Language Processing from the University of Cambridge. Throughout my career, I've worked with a variety of data types, including text, images, videos, speech, and audio. My career has spanned strategy development, project leadership, and the mentorship and management of teams. (The latest CV at all times is available here.)

Experience

Unitary
London (United Kingdom)

SENIOR MACHINE LEARNING RESEARCH ENGINEER, MANAGER
March 2023 - Dec. 2023

- Researching / developing multi-modal video understanding models. Our latest LLM based model got into best of ICCV 2023 magazine (paper).
- Developing evaluation and data pipeline; managing, analysing data sources.
- Managing, hiring, creating on-boarding process.
- Developing the company's product/research strategy, regarding the state of AI and AI regulation.
- Visibility: Publishing papers, presenting at conferences, giving talks at events, writing blog posts. E.g., poster at ICCV 2023.
- Following upcoming AI regulations, visiting conferences (e.g. AIES, London AI Governance Talks, AI Summit Talks, ICCV) and writing about them.

Unitary
London (United Kingdom)

MACHINE LEARNING RESEARCH ENGINEER
May. 2022 - March 2023

- Researching and developing multi-modal video understanding models with a special focus on harmful content detection.
- Developing Data Pipeline from annotation to evaluation.
- Visibility: Giving talks (E.g. Talk on Responsible AI at the University of Cambridge Institute of Astronomy (Dec 2022), writing blog posts.).

O'Neil Risk Consulting & Algorithmic Auditing (ORCAA)
USA (remote)

VOLUNTEER RESEARCHER
Feb. 2022 - Apr. 2022

- Researching systems which infer sensitive characteristics to detect social bias.

Crimson Research Institute
United Kingdom (online)

MENTOR
Sep. 2021 - May. 2022

- Mentoring an undergraduate student on an AI research project.

Private Tutoring
United Kingdom

TUTOR IN COMPUTER SCIENCE, PROOFREADING PhD APPLICATIONS
Oct - Dec 2019

Machine Learning and Real-world Data Course
Cambridge, United Kingdom

LAB DEMONSTRATOR
2017

- Part IA CST course at Computer Laboratory, University of Cambridge.

Supervisor at University of Cambridge
Cambridge, United Kingdom

CO-SUPERVISOR
2016 - 2017

- I co-supervised a Master student, on his thesis project in mutlimodal semantics. He got distinction and later a PhD in our group.

German Research Center for Artificial Intelligence (DFKI)
Saarbrücken, Germany

GUEST RESEARCHER
Jan. - March 2015

- Kognit project: Cognitive Models and Mixed Reality for Dementia Patients.
- Image-based representation of phrases towards a goal-oriented, symbol-based dialogue system.

Neural Information Processing Group
Budapest, Hungary

RESEARCHER, PROJECT MANAGER
2012 - 2015

- Project Manager and Research Engineer. Organised experiments with human participants with special needs.
- Natural Language Generation from pictorial symbols supporting Augmentative and Alternative Communication.
- Neural network model for fast estimation of structured sparse code.
- Semantic grounding in a 3D virtual environment.
- Sentiment analysis from linguistic and multimodal features.
- MediaWiki collaborative content management system in the EuRoSurge (European Robotic Surgery) Project.

MorphoLogic *Budapest, Hungary*
R&D Intern in Natural Language Processing *Jun. - Aug. 2010*
- Information Retrieval using the WordNet ontology in C++ programming language.

Education

University of Cambridge *Cambridge, United Kingdom*
PhD in Machine Learning (Multimodal NLP) *2015 - 2022*
- Thesis: Transparent Analysis of Multi-Modal Embeddings

Eötvös Loránd University *Budapest, Hungary*
MSc in Computer Science *2012 - 2014*
- Information Systems · Grade Outstanding

Eötvös Loránd University *Budapest, Hungary*
BSc in Computer Science *2009 - 2012*
- Grade Excellent

Eötvös Loránd University *Budapest, Hungary*
BSc in Germanic studies *2007 - 2009*
- Discontinued, moved to Faculty of Computer Science.

Skills

Programming	Python, MATLAB, SQL, LaTeX, HTML, CSS, MaterialUI, React
Scientific Computing	PyTorch, Lightning, LLMs, PyTorch DDP, Numpy, Scipy, Scikit Learn, NLTK, OpenCV, TensorBoard, SpaCy
DevOps	Anaconda, Pytest, PDB, Git, AWS, SLURM, WandB
Project Management	Shortcut, GitHub, Notion, Confluence
Languages	Hungarian (native), English (full proficiency), German (intermediate)
Media	Singing, Guitar, Writing, Music Production (Logic Pro, iMovie)

Extracurricular Studies

California Institute of the Arts *Online*
Sharpened Visions: A Poetry Workshop *2021*

Santa Fe Institute *Online*
Introduction to Complexity *2018*

RegML Summer School *Genoa, Italy*
Regularization Methods for Machine Learning *2016*

Lisbon Machine Learning Summer School *Lisbon, Portugal*
Machine Learning and NLP · Learning With Big Data *2014*

Stanford University *Online, Coursera*
Machine Learning · Instructor: Andrew Ng *2014*

Awards

2023	**Best of ICCV 2023 Magazine,** poster and extended abstract	*Paris, France*
2014	**Best Student Video Award,** AAAI Video competition	*Québec, Canada*
2014	**Award of the Challenge Handicap & Technologies,** Reseau Nouvelles Technologies APF conference (for our Telepresence system)	*Lille, France*
2013	**Third Prize,** National Conference of Student's Scholarly Circles (OTDK)	*Budapest, Hungary*

Communal Activity

Women@CL
Mentoring Officer and Representative in the Cambridge Computer Laboratory's Graduate Forum of Women@CL
Cambridge, United Kingdom
2017 - 2018

- Women@CL is an organisation to support women in computer science. It involves a mentoring system and provides representation of role models by organising talks and conferences.

Cambridge NLIP Seminars
Seminar Organiser
Cambridge, United Kingdom
2017

- Weekly seminar series in NLP and Machine Learning related topics

Media

Blog
Writer
Medium
2019 - Present

- Blog on Responsible AI, mental health, management and other topics. My summary of Twitter's First Algorithmic Bias bounty challenge was published in Codex.

Video: Telepresence for People with Communication Impairment
Researcher, Director, Actor
AAAI, YouTube
2014

- "Augmentative and Alternative Communication and Telepresence" video that won the Best Student Video Award at AAAI Video Competition.

Interviews about the AAC Telepresence system
Researcher, Project Lead
News Papers, Television
2014

- index.hu: one of the biggest Hungarian news portals.
- Hungarian RTL Klub news.
- Novum innovation and technology programme of the Budapest TV channel.

Publications

Language as the Medium: Multimodal Video Classification through text only, Laura Hanu, Anita L. Verő, James Thewlis, ICCV 2023, Paris, France - **Best of ICCV 2023 Magazine**
ICCV 2023

Transparent analysis of multi-modal embeddings (PhD Thesis), Anita L. Verő, University of Cambridge, Computer Laboratory, 2022
Cambridge 2022

Efficient Multi-Modal Embeddings from Structured Data, Anita L. Verő and Ann Copestake, arXiv:2110.02577
arXiv 2021

Deconstructing Multimodality: Visual Properties and Visual Context in Human Semantic Processing, Christopher Davis, Luana Bulat, Anita L. Verő and Ekaterina Shutova, *SEM2019, Minneapolis, USA
*SEM2019

Modelling Visual Properties and Visual Context in Multimodal Semantics, Christopher Davis, Luana Bulat, Anita L. Verő and Ekaterina Shutova, NIPS 2018, Montreal, Canada
NIPS 2018

Virtual Embodiment: A Scalable Long-Term Strategy for Artificial Intelligence Research, Douwe Kiela, Luana Bulat, Anita L. Verő and Stephen Clark, NIPS (MAIN) 2016, Barcelona, Spain
NIPS 2016

Comparing Data Sources and Architectures for Deep Visual Representation Learning in Semantics, Douwe Kiela, Anita L. Verő and Stephen Clark, Proceedings of the Empirical Methods in Natural Language Processing Conference (EMNLP 2016) Austin, Texas
EMNLP 2016

Columnar Machine: Fast estimation of structured sparse code, András Lőrincz, Zoltán Á Milacski, Balázs Pintér, Anita L. Verő Biologically Inspired Cognitive Architectures, 2015
BICA 2015

Maintain and Improve Mental Health by Smart Virtual Reality Serious Games, András Sárkány, Zoltán Tősér, Anita L. Verő, András Lőrincz, Takumi Toyama, Daniel Sonntag. Proceedings of the 5th International Symposium on Pervasive Computing Paradigms for Mental Health, LNCS Spinger, 2015
MINDCARE 2015

Towards a Smart Wearable Tool to Enable People with SSPI to Communicate by Sentence Fragments, Gyula Vörös, Anita L. Verő, Takumi Toyama, András Lőrincz, Balázs Pintér, Brigitta Miksztai-Réthey, Daniel Sonntag. Proceedings of the International Symposium on Pervasive Computing Paradigms for Mental Health, LNCS Spinger, 2014
MINDCARE 2014

Mobile AAC Solutions using Gaze Tracking and Optical Character Recognition, Gyula Vörös, Brigitta Miksztai-Réthey, Anita L. Verő, Takumi Toyama, Jason Orlosky, Daniel Sonntag, András Lőrincz. 16th Biennial Conference of the International Society for Augmentative and Alternative Communication (ISAAC), 2014
ISAAC 2014

Gaze Tracking and Language Model for Flexible Augmentative and Alternative Communication in Practical Scenarios, Anita L. Verő, Brigitta Miksztai-Réthey, Gyula Vörös, Ádám Zsigmond, Balázs Pintér, Takumi Toyama, Jason Orlosky, Daniel Sonntag, András Lőrincz. 16th Biennial Conference of the International Society for Augmentative and Alternative Communication (ISAAC), 2014
ISAAC 2014