



# Argyri (Renia) Morfakidou

O Home: Denmark

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Date of birth: 22/05/2000 Nationality: Greek

#### **ABOUT ME**

I hold a bachelor's degree in Psychology and I currently pursue a Master's Degree in Information Technology and Cognition. Having dedicated three years to research in cognitive neuroscience, I am now exploring the intersection of technology and cognition.

#### **WORK EXPERIENCE**

## Internship at NEAD, Neurocognition and Emotion in Affective Disorders **Centre**

[ 2025 – Current ]

https://nead.dk/

My thesis project, in collaboration with NEAD, focuses on biomarkers detection across specific psychiatric conditions, including major depressive disorder, bipolar disorder, psychosis spectrum disorders, borderline personality disorder, and dissocial personality disorder. Measurements of electrodermal activity, eye gaze patterns, and emotion ratings are recorded while participants engage with relevant VR scenarios (specifically six immersive 360-degree VR video clips of social scenarios). The scope is the design of a new accurate diagnostic tool.

### [ 01/06/2024 - 01/02/2025 ] Internship at HekaVR

https://hekavr.com/

City: Copenhagen | Country: Denmark

- Heka VR, a spin-off company of Khora Virtual Reality, uses Virtual Reality to provide immersive therapy for people suffering from treatment resistant schizophrenia and eating disorders.
- My role entailed evaluating the VR psychotherapy software, conducting thorough research on existing studies and technological advancements in VR therapy, exploring methodologies for integrating EEG with VR technology, analyzing mental health treatments and software best practices (innovation research), and facilitating communication between software developers and clinical researchers.

## Participation in the junior researcher program at ETHOS lab, based in the IT [ 2025 ] University of Copenhagen

https://ethos.itu.dk/

ETHOS Lab explores and experiments with creative, critical, and feminist methods and methodologies analysing technology in practice. My project focuses on how female health is mediated by digital technologies.

## Voluntary internship at the Memory Clinics of the 1st Department of [ 07/2021 - 09/2023 ] **Neurology of Eginition Hospital**

https://eginitio-en.uoa.gr/

- Attended neuropsychological evaluation of subjects in a longitudinal study addressing research questions concerning the preclinical and prodromal stage of Alzheimer's disease.
- Administered the Mini-Mental State Exam (MMSE).
- Investigated the relationship between objective sleep measures (Actigraph & WatchPAT) and volumetric characteristics (Magnetic Resonance). Data provided by

the Aiginition Longitudinal Biomarker Investigation Of Neurodegeneration (ALBION) cohort. Supervisor: Dr Angeliki Tsapanou, PhD

#### [ 01/10/2022 - 03/2023 ] Internship at Neurocognition and Language Lab

Faculty of Psychology and Education Sciences of the University of Porto https:/ /sigarra.up.pt/fpceup/pt/web base.gera pagina?p pagina=NCL HOME

Country: Portugal

- Contributing to the Time2Read project (https://www.time2read.com.pt/).
- Implementing behavioral, EEG and eye-tracking methods to explore the relationship between time perception and reading skills

#### **Student Lab Assistant** [ 2020 - 2022 ]

#### Lab of Cognitive Neuroscience, Aristotle University

City: Thessaloniki | Country: Greece

- Conducted research and drafted a scientific paper focused on the implementation of the Artificial Grammar Learning (AGL) protocol. The AGL protocol is considered to simulate the cognitive process of "natural" grammar acquisition, and thus has been implemented on both humans and artificial intelligence models.
- Conducted a preclinical study for my thesis work: I studied the effects of chronic unpredictable stress on the anxiety behavior of adult male and female rats, as well as the neuroprotective role of externally administered erythropoietin. I participated in the daily activities of the laboratory, which, among other things, included the daily care of the experimental animals, the implementation of the unpredictable stress protocol but also the examination of experimental animals in various behavioral study tests. Data collection, statistical analysis, interpretation of the results and scientific writing were performed by myself

#### [ 03/2022 - 04/2022 ] Internship at the Outpatient Pedopsyciatric Clinic, Ippokrateion Hospital

• Administred the WISC-V GR (Wechsler Intelligence Scale for Children - 5th Edition)

#### **EDUCATION AND TRAIN-**ING

[01/09/2023 - Current] **MSc in IT & Cognition** 

University of Copenhagen https://www.ku.dk/en

**City:** Copenhagen | **Country:** Denmark |

#### [ 2019 – 2022 ] **BA in Psychology**

Aristotle University of Thessaloniki https://www.auth.gr/

**Country:** Greece | | **Final grade:** 9,35 | **Type of credits:** ECTS | **Number of credits:** 250 | **Thesis:** "Interaction of exposure to chronic unpredictable stress and Erythropoietin administration on anxiety-like behavior"

#### **LANGUAGE SKILLS**

Mother tongue(s): Greek

Other language(s):

#### **English**

LISTENING C2 READING C2 WRITING C2

**SPOKEN PRODUCTION C2 SPOKEN INTERACTION C2** 

### **French**

LISTENING B2 READING B2 WRITING B2

**SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2** 

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

#### **PUBLICATIONS**

Objective Sleep Function is Associated with Hippocampal Subfield Volumes in

[2024] Community-Dwelling Adults

[2023] Neuroarchitecture

Reference: Studio Urbanism

Link: https://docs.google.com/document/d/

<u>1bnRKosh29rPhfFhJJCejzWdnXZoAkjRhdkXIbtXT7zk/edit?usp=drive\_link</u>

Language Differences Among Individuals with Normal Cognition, Amnestic and non-

[ 2022 ] Amnestic MCI and Alzheimer's Disease.

Formal language hierarchy as a hierarchy of cognitive complexity | Renia [ 2022 ] Morfakidou, Susana Silva, Filomena Inácio, Karl Magnus Petersson, Vasiliki Folia

> Presented in 16º Encontro Nacional da Associação Portuguesa de Psicologia Experimental (APPE) and the XIII Congreso de la Sociedad Española de Psicología Experimental (SEPEX)

#### **PROJECTS**

[ 10/2024 - Current ] Machine Learning for Dementia Detection: EEG, MRI, SPEECH

This study aims to explore and compare the effectiveness of machine learning (ML) models in detecting AD using three distinct data modalities: electroencephalography (EEG) data, Magnetic Resonance Imaging (MRI) data, and textual data.

[ 12/2024 – Current ] **Technology Mediated Female Health** 

FemTech falls into the realm of Medical Technology and can be studied within the field of science and technology studies (STS) of digital health. This project will not intend to argue in favor of rejecting the integration between female health and digital innovation. Instead, it offers a critical reflection on the development of the field so far. Other researchers and writers have contributed to the emerging field of "critical digital health studies" (Lupton, 2014). This is an important step toward designing healthcare technology that truly functions in the interest of the targeted population.

## **HONOURS AND AWARDS**

[ 01/09/2023 ] **MSc grant Awarding institution:** Onassis Foundation

[ 01/09/2023 ] **MSc grant Awarding institution:** Leventis Foundation

[ 10/2022 ] erasmus + internship grant

#### **VOLUNTEERING**

Therapeutic Riding Center of Serres (KETHIS) Greece

Solidarity cafés Greece

A space for social cohesion, interaction and solidarity between students and academics from Aristotle University in Thessaloniki and migrants

Volunteer in various film festivals (Thessaloniki International Film Festival, **CPH:DOX, Aegean Film Festival, Transmediale)** 

Dear Selection Committee,

With this letter I would like to express my sincere interest in participating in the VoCS doctoral project. I am very excited to apply for this Phd opportunity, as it aligns closely with my academic background and professional experience.

I am currently navigating the last semester of my MSc in IT & Cognition, following the completion of a Psychology degree with a focus on cognitive neuroscience. Since 2021, I have been involved in various research projects, undertaking tasks related to data collection, analysis, and scientific writing.

The first study I contributed to focused on the implementation of the Artificial Grammar Learning (AGL) protocol, where I was responsible for collecting behavioral data, among other tasks. Later, during my internship at the Cognitive Disorders Clinic of the 1st Department of Neurology at Eginition Hospital, I significantly contributed to multiple neuropsychological assessments and attended numerous neurological examinations. I was involved in data collection, data analysis, and scientific writing for the Aiginition Longitudinal Biomarker Investigation Of Neurodegeneration (ALBION), an ongoing longitudinal study examining the preclinical and prodromal stages of Alzheimer's disease. As part of this work, I analyzed MRI and objective sleep data.

Additionally, in 2023, during my research internship at the Neurocognition and Language Research Group at the Faculty of Psychology of the University of Porto, I was involved in EEG data collection and analysis, managing the EEG equipment and interacting with study participants on a daily basis.

Recently, I completed my internship at HekaVR, a Copenhagen-based startup, where I focused on integrating EEG with VR technology. My work involved researching methodologies for real-time signal analysis, familiarizing myself with a cutting-edge EEG device, facilitating workshops aimed at introducing psychologists to the EEG equipment and accompanying software.

Currently, I am preparing a scientific paper in collaboration with a PhD student and a research group based at UIC (Chicago). This project explores and compares the effectiveness of machine learning (ML) models in detecting Alzheimer's disease using three distinct data

modalities: EEG data, MRI data, and textual data (NLP approaches). Within this project, I have been actively involved in EEG signal processing and analysis. The primary programming language used in both my MSc programme and most of the research projects I have participated in is Python.

In general, I am deeply motivated by the opportunity to work in the intersection of cognitive science and technology. Academically driven, I am committed to pursuing a doctoral degree and am particularly drawn to the topic, which is not only intellectually stimulating but also belongs to an area where I believe I can make a meaningful contribution. The interdisciplinary nature of the project, which integrates social cognitive neuroscience, computational modeling, and linguistic analysis, truly resonates with my research background.

Thank you for your consideration.

Best regards,

Argyri Morfakidou

Contact Details of two potential referees for the candidate Argyri Morfakidou:

1. Manex Aguirrezabal Zabaleta, Associate Professor & Researcher at the University of Copenhagen

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Email: manex.aguirrezabal@hum.ku.dk

2. Costanza Navarretta, Senior Researcher at the University of Copenhagen

Teelephone: +4535329079 Email: costanza@hum.ku.dk