

Alp Akova

PHD IN COMPUTATIONAL NEUROSCIENCE

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🌐 [akovalp](#)

Skills

- **Computational Linguistics:** Large language models, Natural language processing, Third-party API integration
- **Machine Learning:** scikit-learn, PyTorch, spaCY, NLTK, gensim, surprise
- **Data Science:** SQL, Pandas, NumPy, Pinecone (Vector Database)
- **Neuroscience Tools:** EEGLAB, MNE, Python Machine Learning, MATLAB

Work Experience

Engineering Researcher *SUBCONSCIOUS AI* (subconscious.ai) [🔗](#) *New York, United States*
24/08/2023 – 24/12/2024

- Engineered LLM-powered decision systems using Python and FastAPI
- Developed interactive dashboards using R Shiny and Weights & Biases for real-time experiment monitoring and model performance visualization
- **Significant Outcome:** Improved real-world alignment of decision-making systems by optimizing prompt engineering techniques and implementing robust evaluation frameworks, resulting in a 25% improvement in Spearman R correlation to real-world results
- **Technologies:** Python (NumPy, Pandas, Langchain, Pydantic), R, FastAPI, Docker, Third party LLM API's

Research Internship *UNIVERSITY OF PADOVA, BABY LAB* *Padova, Italy* 01/04/2023
– 31/07/2024

- Conducted comparative analysis of LLM models (ChatGPT, Claude, LLama) for language teaching applications
- Developed evaluation frameworks to assess LLM performance in educational contexts
- **Significant Outcome:** Built an end-to-end LLM agent that generates personalized reading texts based on user interests, target language, and proficiency level, creating tailored language learning materials
- **Technologies:** Python, OpenAI API, Ollama, NLP libraries, SQL

Project Manager *LINKAGE TURKEY* *Istanbul, Türkiye*
01/09/2022 – 01/01/2023

- Designed and developed course modules and learning materials
- Created effective class flow structures to facilitate learning and engagement
- Ensured customer satisfaction through clear communication and follow-up
- **Concepts:** Instructional design, project management, educational content development

Education

PhD in Cognitive Neuroscience *University of Trento* *Trento, Italy* 02/09/2024
– CURRENT

- Investigating the relationship between physical activity and brain connectivity in aging using EEG-based age prediction models (brain-PAD)
- Developing machine learning frameworks to analyze EEG biomarkers for cognitive health assessment and brain age prediction
- Examining frequency-specific neural oscillations and cross-frequency coupling as indicators of cognitive aging
- Analyzing large-scale EEG datasets (LEMON, ADNI, PhysioNet) and collecting primary data with wearable

devices

- **Research Goals:** Establish links between physical activity and neural aging, develop personalized interventions, create novel EEG biomarkers
- **Technologies:** Python (PyTorch, scikit-learn), MATLAB, MNE, FieldTrip, ICA, deep learning (CNNs, LSTMs), ensemble methods

Master of Science *University of Padova*

Padova, Italy 09/09/2021

– 31/07/2024

- Specialized in developmental psychology and educational methods
- Research focus with proficiency in statistical analysis
- **Field of study:** Developmental and Educational Psychology
- **Master Thesis:** Evaluated AI-generated texts (open/closed-source models) against human-written materials for language teaching using the Functional Adequacy Scale. Assessed text alignment with CEFR levels and user perception. Results provide insights for effective AI integration in language education.
- **Thesis Title:** Assessing the Suitability of AI-Generated Texts For Language Teaching Across Proficiency Levels Using the Functional Adequacy Scale

Bachelor of Arts *Sabancı University*

Istanbul, Türkiye

09/09/2016 – 18/08/2020

- Specialized in decision-making processes, consumer behavior, and organizational psychology
- **Field of study:** Psychology
- **Final grade:** 3.0

Languages

Mother tongues: Turkish, English

Conversational: Italian