Fermín Travi

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FerminT Argentinian, Italian

Research Interests

Themes | Neuroscience-inspired artificial intelligence, language representation, visual behaviour

Methods | MRI, eye-tracking, machine learning, data acquisition and analysis

Applications | Cognitive modeling, natural language processing, computer vision

Education

April 2022 – Ongoing | **PhD student in Computer Science**

Title: "Artificial semantic abstractions based on eye movements during online reading experiments" Universidad de Buenos Aires. Facultad de Ciencias Exactas y Naturales. Departamento de Computación.

Laboratorio de Inteligencia Artificial Aplicada (LIAA). Buenos Aires, Argentina.

March 2022 | Licenciatura en Ciencias de la Computación (Bachelor's degree + MSc in Computer Science)

Universidad de Buenos Aires. Facultad de Ciencias Exactas y Naturales. Buenos Aires, Argentina.

8.63 average (historical average to date: 8.19)

Research and Work Experience

Winter 2024 | Research Intern

Project: PIBE: Progression Invariant Brain Embeddings

Computational Psychiatry & Neuroimaging group. IBM Research. New York, USA.

Autumn 2022 | Research Intern

Project: Efficient and scalable mobile AR application for tool detection

R&D department. Marposs S.p.A. Bologna, Italia.

July 2021 – March 2022 | Research Intern

Project: Human visual search in natural scenes computational models

Universidad de Buenos Aires. Facultad de Ciencias Exactas y Naturales. Departamento de

Computación. Laboratorio de Inteligencia Artificial Aplicada (LIAA). Buenos Aires, Argentina.

2014 - 2015 | **Software Developer**

PSA Peugeot Citröen, Argentina.

Conference and Journal Publications

1. **Travi, F.** et al. Impact of long-COVID on the local and global efficiency of brain networks in Clinical Neuroimaging (2024). Under review.

2. **Travi, F.**, Ruarte, G., Bujia, G. & Kamienkowski, J. E. *ViSioNS: Visual Search in Natural Scenes Benchmark* in *Thirty-sixth Conference on Neural Information Processing Systems (NeurIPS)* (2022). Earlier version at NeurIPS'21 Workshop on Shared Visual Representations in Human and Machine Intelligence.

Refereed Workshops Contributions

2021

3. **Travi, F.**, Ruarte, G., Bujia, G. & Kamienkowski, J. E. Benchmarking human visual search computational models in natural scenes: models comparison and reference datasets in Shared Visual Representations in Human and Machine Intelligence 2021 Workshop at NeurIPS (2021).

Talks and Posters

2023

4. **Travi, F.** et al. Neural correlates of cognitive impairment phenotypes following a COVID-19 infection in Annual Congress of the Argentine Society of Neurosciences (2023).

2021

5. **Travi, F.**, Ruarte, G., Bujia, G. & Kamienkowski, J. E. Benchmarking human visual search computational models in natural scenes: models comparison and reference datasets in Annual Congress of the Argentine Society of Neurosciences (2021). (Virtual Oral Presentation).

Teaching Experience

2023- | Algorithms and Data Structures II

2024 | Teaching Assistant

Universidad de Buenos Aires. Facultad de Ciencias Exactas y Naturales. Departamento de Computación.

1Q 2022 | Algorithms and Data Structures I

Teaching Assistant

Universidad de Buenos Aires. Facultad de Ciencias Exactas y Naturales. Departamento de Computación.

2Q 2021 | Algebra (Workshop in Functional Programming)

Teaching Assistant

Universidad de Buenos Aires. Facultad de Ciencias Exactas y Naturales. Departamento de Computación.

Reviewer Experience

2022

NeurIPS 2022 Track on Datasets and Benchmarks

Two articles on the main topic of autonomous driving and visual reasoning were reviewed.

Awards

April 2022 – April 2027

PhD scholarship

National Council on Scientific and Technical Research (CONICET)

Courses

- NMA-NeuroAI 2024. Neuromatch Academy. Two-week full-time international online summer school course on NeuroAI
- NMA-Deep Learning 2021. Neuromatch Academy. Three-week full-time international online summer school course on Deep Learning.

Languages

- International English Language Testing System (IELTS). Score: 8.0.
- Certificate of Proficiency in English (CPE). Grade: B. ESOL Examinations, University of Cambridge.