Arghavan Aslani

M.Sc. student

 github.com/arghavanaslani
 arghavan-aslani
 aslaniarghavan@gmail.com
 +98.938.868.7792

EDUCATION

M.Sc. in Cognitive Science, cog-SUP, Sorbonne Université and Université Paris Cité, Paris, France   **2024 -**
Computational Neuroscience and Artificial Intelligence Track
 cog-sup.fr

B.Sc. in Electrical Engineering, University of Tehran, Tehran, Iran   **2017 - 2022**
Control Systems Focus

- Thesis: "LiveGaze: an integrated application for real-time gaze contingent display of multi-source   [Code Repository] eye-tracking data"
- GPA: 15.24/20

RESEARCH EXPERIENCE

Crowd Cognition Group, Ludwig Maximilians Universität München —   Apr. 2022 - present
Research Assistant
 crowdcognition.net

Co-supervisors: Dr. Bahador Bahrami, Prof. Ophelia Deroy

- Data Analysis - Collaboration with Museu do Amanhã, Rio de Janeiro, Brazil
  - Conducted a comprehensive analysis of eye-tracking data and questionnaires to address inquiries from museum stakeholders.
  - Generated detailed reports, which included heatmaps, interactive diagrams, histograms of specific events from eye-tracking data, and identified meaningful patterns.
  - Managed a team of 5 individuals, overseeing data collection and preprocessing.
- Investigating Variances in Visual Perception with Mobile Eye-Tracking
  - Conducted data collection using the Pupil Invisible eye-tracking device in two conditions: individual and pair.
  - Analyzed collected data with statistical tests, generated heatmaps, and applied various similarity metrics.
- LiveGaze - Real-Time Visualization of Multi-Source Eye-Tracking Data
  - Developed the MVP of the software using Pupil Invisible API, in Flask framework. The objective is to create real-time visualization including heatmaps and saliency maps from multiple observers.

ESLAB, University of Tehran — Lead Reseach Assistant   July 2021 - August 2022
 www.linkedin.com/company/eng-sci-lab

supervisor: Dr. Ehsan Maani Miandoab

— Developed a 2-DOF robot named "Spider-Paint" capable of translating images into drawings on a whiteboard using a marker. (Link to Videos)
— Designed and implemented a control algorithm in C to operate two stepper motors on a vertical plane using a single Arduino. (Link to Code)
— Authored a paper accepted at the ISME Conference 2022 by consolidating contributions from various team members.

PUBLICATIONS

- **Screens in the Museum: Understanding Visitor Interactions Through Mobile Eye-Tracking**
  Contributors: **A. Aslani**, S. Saeedpour, D. Ferreiro, B. Bahrami, O. Deroy
  Status: Under Preparation
- **Gaze scan-path similarity in mobile eye tracking using dynamic time warping (DTW)**
  Contributors: D. Gulhan, A. Aliyeva, S. Bolouki, **A. Aslani**, O. Deroy, B. Bahrami
  https://doi.org/10.31219/osf.io/57j8y

- **Design, Fabrication and Control of 2 DoF Robot in Vertical Plane**
  Authors: **A. Aslani**, E. Maani Miandoab, H. Najafi, H. Bahreininan, M. Hemmati, M. Fakher
  Conference: The 30th Annual International Conference of the Iranian Society of Mechanical Engineers, 2022
  https://civilica.com/doc/1468825/

Work Experience

CLIC, University of Tehran — Market Analyst July 2019 - Sep 2019

— Analyzed the product's value propositions, estimated market size, and identified early adopters to pinpoint optimal markets for eye-tracking devices.
— Scheduled and facilitated meetings with potential customers from major companies to understand their needs.

Projects

Exploratory Analysis of Digikala User Search Data

Conducted in-depth exploratory analysis on user search data from Digikala, Iran's largest online retailer, based on the previous year's dataset. Due to confidentiality, the analysis was performed in a secure environment, and the specific details and notebook cannot be shared.

User Experience Analysis for Language Learning App (Alpha)

Lead the user experience data collection and analysis initiative for the alpha version of a language learning application. Employing surveys, interviews, and user behavior analytics to gather insights aimed at enhancing usability and addressing user needs effectively.

Additional Training

Computational Neuroscience Boot Camp, Neuromatch Academy Certificate
Task-Oriented Course in Data Analysis with Python Certificate
Task-Oriented Course in SQL Certificate

Extracurricular Activities

- Member of BTCS (Brain Tech and Cognitive Science Club)
  Contributed to event planning and execution to attract students to the field.

- Performer and Member of Council at Performing Arts Club Link to Instagram Page

Languages

English	Full Professional Proficiency (IELTS overall:7.5, L:8.5, R:7.5, W:7, S:7.5)
Farsi(Persian)	Native or bilingual proficiency

Technical Skills

Data Analysis	Python (Numpy, Pandas, Matplotlib, Seaborn, scikit-learn), SQL (Postgres, MySQL), MATLAB, R
Web Development	Python (Flask, Django), HTML5, CSS, JavaScript
Operating Systems	Linux(Ubuntu), Windows
Tools	Git, Jupyter Notebook, LATEX, Microsoft Office

References

- **Dr. Bahador Bahrami** - bahador.bahrami@psy.lmu.de
  Director of Crowd Cognition Lab, Faculty of Psychology and Educational Sciences, Ludwig Maximilian University, Munich

- **Prof. Ophelia Deroy** - Ophelia.Deroy@lrz.uni-muenchen.de
  Chair for Philosophy of Mind and Neuroscience, Ludwig Maximilian University, Munich

- **Dr. Ehsan Maani Miandoab** - e.maani@ut.ac.ir
  Assistant Professor, Faculty of Engineering Sciences, College of Engineering, University of Tehran, Iran