



Arghavan Aslani

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EDUCATION

B.Sc. in Electrical Engineering, University of Tehran, Tehran, Iran

2017 - 2022

Control Major

- Thesis: "LiveGaze: Real-Time Visualization of Multi-Source Eye-Tracking Data in an Integrated Application" [Code Repository](#)

RESEARCH EXPERIENCE

Crowd Cognition group, Ludwig Maximilians Universität München — Apr. 2022 - present
Research Assistant

 crowdcognition.net

- Exploratory Data Analysis - Collaboration with Museu do Amanhã, Rio de Janeiro, Brazil
 - Developed a [comprehensive guide](#) for data collection with Pupil Invisible eye-tracking device, for the assistants, ensuring standardized procedures and high-quality data acquisition.
 - Implemented and managed a labeling system for collected data, optimizing the organization and efficiency of subsequent analysis.
 - Conducted in-depth data analysis, extracting meaningful insights and patterns, and delivered detailed reports to the museum, contributing valuable findings to the project's success.
- Investigating Variances in Visual Perception with Mobile Eye-Tracking
 - Conducted a comprehensive data collection using the Pupil Invisible eye-tracking device in two conditions: individual and pair.
 - Analyzed collected data using statistical tests to uncover insights in both spatial and temporal domains.
 - Applied various similarity metrics to quantify spatial and temporal differences in the data.
- LiveGaze - Real-Time Visualization of Multi-Source Eye-Tracking Data
 - Developed the Minimum Viable Product (MVP) in Flask framework, with ongoing development to enhance features and functionality.

ESLAB, University of Tehran — Lead Research Assistant

July 2021 - August 2022

 www.linkedin.com/company/eng-sci-lab

- 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.

Conducted in-depth analysis to identify optimal markets for eye-tracking devices.

Scheduled and facilitated meetings with potential customers.

Prepared and delivered weekly progress reports on the analysis.

PUBLICATIONS

- **Measuring Gaze Scan-Path Similarity Between Observers Using Mobile Eye-Tracking**
Contributors: **A. Aslani**, D. Gulhan, A. Aliyeva, S. Saeedpour, O. Deroy, B. Bahrami
Status: Under Preparation
- **Design, Fabrication and Control of 2 DoF Robot in Vertical Plan**
Authors: **A. Aslani**, E. Maani Miandoab, H. Najafi, H. Bahreinian, M. Hemmati, M. Fagher
Conference: The 30th Annual International Conference of the Iranian Society of Mechanical Engineers, 2022
Publisher: <https://civilica.com/doc/1468825/>

CERTIFICATIONS

Computational Neuroscience, Neuromatch Academy

[Link to Certificate](#)

Task-Oriented Course in Data Analysis with Python

[Link to Certificate](#)

Task-Oriented Course in SQL

[Link to Certificate](#)

VOLUNTEER EXPERIENCE

- Member of BTCS (Brain Tech and Cognitive Science Club)
- Performer and Member of Council at Performing Arts Club

[Link to Instagram Page](#)

TECHNICAL SKILLS

Data Analysis Python (Numpy, Pandas, Matplotlib, 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
Senior Research Scientist, Faculty of Psychology and Educational Sciences, 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
- **Prof. Ophelia Deroy** - Ophelia.Deroy@lrz.uni-muenchen.de
Chair for Philosophy of Mind and Neuroscience, Ludwig Maximilian University, Munich