

# OMRAN K. SAFI

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## EDUCATION

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### **Bachelor of Arts in Psychology**

University of British Columbia

2020

Specializing in Cognitive Psychology

### **High School Diploma**

Point Grey Secondary

2015

Graduated with honors

## RESEARCH EXPERIENCE

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### **Novel Analysis of Representational Connectivity in the Brain**

Present

Motivated Cognition Lab – University of British Columbia

Supervisors: Dr. James Kryklywy and Dr. Rebecca Todd

- Project focused on methodological innovation for neuroimaging analysis
- Analysis of emotional and sensory communication information in the brain
- Statistical analyses and graphical representation using R
- Matrix manipulations in MATLAB
- Neuroimaging processing and displaying done in AFNI
- RSA script in Python

### **Senior Thesis\***

2020

Behavioral Sustainability Lab - University of British Columbia

Motivated Cognition Lab – University of British Columbia

Supervisors: Dr. Jiaying Zhao and Dr. Rebecca Todd

\*Data collection disrupted due to Covid-19

- Examining the affective responses produced by VR induced overview effect and its effect on climate change attitudes
- Produced novel idea of examining relationship between the overview effect and climate attitudes
- Conducted literature review
- Created study design and protocol
- Completed and obtained ethics approval (UBC BREB)
- Rendered stimulus (Earth) in Unity
- Collect, record, and analyze subject data (Heart Rate, GSR, and Questionnaires)

**Behavioral Sustainability Lab**

2019-Present

University of British Columbia

- Worked on my senior thesis examining the consequences of the overview on climate change attitudes
- Completed and obtained ethics (UBC BREB)
- Dynamic model of Earth created in Unity
- Coded aspects of the environment in C# (atmosphere, cloud movement, earth rotation)
- Coded player movement scripts in C#
- Coded Oculus Rift headset and Oculus controller integration in C#
- Prepared surveys in Qualtrics measuring several psychological variables (PANAS-X, AWE-S, INS, Climate Concern)
- Learned use of Empatica E4 wristband to collect physiological data (Heart Rate & GSR)
- Learned to use QRSTool, an open source software, to analyze physiological data

**Behavioral Reward Affect & Impulsivity Neuroscience (BRAIN) Lab** 2019 - 2020

University of British Columbia

- Project focusing on using the MUSE (portable EEG headband) to assess implicit craving in clinical populations with concurrent stimulant use and mental disorders
- Project aiming to use the MUSE headband to identify a novel biomarker for craving and relapse
- Worked on ethics applications for new studies and add-ons for ongoing studies

**Motivated Cognition Lab**

2018 – Present

University of British Columbia

- Worked on study investigating the influence of physiological arousal on reward
- Head research assistant for experiment examining attentional biases and emotion
- Received supervision for senior thesis
- Learned proper EEG usage – electrode handling and running participants
- Learned EEG preprocessing and data analysis (EEGLAB & ERPLAB)
- Worked on project aiming to find a novel analysis technique for fMRI data
- Learned to use Analysis of Functional NeuroImages (AFNI) – an open source environment for processing and displaying fMRI data

**PUBLICATIONS AND POSTERS**

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**Poster Presentation – Safi, O.K.,** Tommasi, M. (2020). Carbon Footprint Information Promotes Sustainable Food Choices. Northwest Cognition and Memory (NOWCAM) Conference.

**Poster Presentation – Safi, O.K.,** Li, A.C., Cheng, A.F., Schuetz, C.G. (2020). Assessing Cue-Induced Craving in Individuals with Methamphetamine Addiction Through Portable EEG Technology. Department of Psychiatry 2020 Virtual Research Day.

**Paper – Safi, O. K.,** Tommasi, M., Sun, B., Thornley, J., Dodani, A. (2020). Carbon Footprint Information Promotes Sustainable Food Choices. UBC SEEDS.  
<https://open.library.ubc.ca/cIRcle/collections/undergraduateresearch/18861/items/1.0392724>

**Poster Presentation – Safi, O.K.,** (2020). Climate Change, Affect, and The Overview Effect. UBC Psychology Undergraduate Research Conference\*.

\*Poster accepted but conference cancelled due to Covid-19

**Paper – Safi, O. K.,** Hughes, B. (2018). Evolutionary Plausibility of Connectionist Models of Cognition. *Cognitive Systems UBC*. Displayed on program website.

## SKILLS

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**Programming Languages:** C, C#, Python, R, HTML/CSS

**Statistical Programs:** R, SPSS, JASP, G-Power

**Experimental Technology:** PsychoPy, QRSTool, Afni (Neuroimaging), MATLAB, EEGLAB & ERPLAB, Qualtrics

**Web Frameworks:** WordPress, Weebly, Squarespace

**Visual/Audio Programs:** Unity, Adobe Photoshop, Adobe Illustrator, Audacity

**Natural Languages:** English, Dari, Farsi, Hindi, Urdu, Spanish, German (Learning)

## AWARDS & ACCOMPLISHMENTS

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**Visiting Philosopher** 2018  
**University of Pittsburgh, Department of Philosophy**

- Worked with other visiting academics on a wide range of issue in philosophy of science
- Areas discussed included laws of nature, thought experiments, scientific controversy, confirmation theory, ethical issues in science, and modern technologies
- Funding provided by Pittsburgh University's Center for Philosophy of Science

**Grant** 2018/2019  
**Arts Undergraduate Society (AUS)**

- Wrote grant application and secured a club operation grant from the AUS
- Amount: \$1000

**Cognitive Systems Podcast (CogsCast)** 2017 - 2020  
**Official Podcast of UBC CSS**

- Cofounder and host
- Podcast discussing and examining various topics of interest in Cognitive Science
- Topics include, but are not limited to, consciousness, intelligence, psychedelics, and emerging technologies

**Vice President Media** 2019 - 2020

**Cognitive Systems Society (CSS)**

- Responsible for the Cognitive Systems Podcast (CogsCast)
- Responsible for improvement and maintenance of the CSS website
- Responsible for monthly newsletter
- Involved in planning and running academic events throughout the year

**Vice President Arts External** 2018 - 2019

**Cognitive Systems Society (CSS)**

- Cognitive Systems representative to the Arts Undergraduate Society (AUS)
- Established a working relationship between the AUS and the CSS
- Successfully secured AUS club grant
- Involved in planning and running events for the CSS and AUS

## **CERTIFICATIONS**

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**VCH Privacy and Confidentiality** 2019  
Vancouver Coastal Health

**Ethical Conduct for Research Involving Humans** 2016  
Tri-Council Policy Statement 2: CORE

## **MEMBERSHIPS AND AFFILIATIONS**

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**Cognitive Science Society:** Member (2020)

**Cognitive Systems Society:** Member (2017-2020), Executive (2018-2020)

**UBC Psychology Students Association:** Member (2019-2020)

**UBC Arts Undergraduate Society:** Departmental Representative (2018/2019)

## **COMMUNITY AND VOLUNTEER ACTIVITIES**

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**Volunteer at Technical Career Fair** 2020

University of British Columbia

An annual fair held in January at the University of British Columbia that provides students the opportunity to meet with industry employers

**Planning Committee Member** 2018

Life Sciences Research Night – Undergraduate Research Opportunities

An annual event held at the University of British Columbia that aims to educate and inspire undergraduate students about research and how to get into research

**Imagine Day Orientation Leader** 2017

University of British Columbia

Provided orientation to incoming undergraduate students and provide ongoing support throughout their first year of university

**Peer Mentor**

2011 – 2015

Best Buddies Canada

Paired with a student with an intellectual and/or developmental disability

Participated in activities throughout the year – coffee, movies, skating, basketball, etc.