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Massachusetts Institute of Technology  
Brain and Cognitive Sciences

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**Education**    **Mount Holyoke College**, South Hadley, MA, USA  
Bachelor of Arts, 2017. *Magna Cum Laude* with High Honors; *Phi Beta Kappa*.  
Major: Neuroscience & Behavior. Minor: Graphic Narrative & Visual Storytelling  
Thesis: *Prosody, Poetry and Processing: an ERP Investigation of Auditory Imagery*

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**Research**    **Brain and Cognitive Sciences, Massachusetts Institute of Technology**  
Research Support Associate, LanguageLab. P.I. **Edward A Gibson**.  
• Investigated prosody as a candidate for a cross-linguistic universal in collaboration with **Leon Bergen** (UCSD).  
May 2017-  
Present    • Assisted visiting researcher, **Paula Rubio-Fernandez** (University of Oslo), in investigating referential communication, Theory of Mind & lexical pragmatics.  
• Assisted in data collection via event related potential (ERP) and functional magnetic resonance imaging (fMRI) for **Ev Fedorenko** (MIT, Harvard, MGH).  
• Collected and analyzed data for **Project Prakash**, in New Delhi, India - an initiative from the **Sinha Lab** for Vision Research (MIT).  
• Prepared and illustrated stimuli for a referential communication task in collaboration with **Hannah Rohde & Maddie Long** (University of Edinburgh).  
  
Feb 2015-  
Present    **Neuroscience and Behavior, Mount Holyoke College**  
Senior Thesis Research Assistant. P.I. **Mara Breen**.  
• Employed ERP to investigate the role of rhythm in implicit prosody during silent reading of limericks.  
  
Oct 2016-  
Oct 2017    **Neuroscience & Behavior and Biological Sciences, Mount Holyoke College**  
Research Assistant. P.I. **Rena Brodie**.  
• Behavioural ecology research on the effect of unmanned aerial vehicles (drones) on urban avian populations.  
  
Jan 2016-  
Present    **Independent Research – MuSyC: Music, Synaesthesia, Color**  
• Using electrical engineering, signal processing, fabrication, data visualization and design to create a device which simulates chromesthetic synaesthesia.  
  
Summer 2016    **Janelia Research Campus, Howard Hughes Medical Institute**.  
Undergraduate Research Scholar. P.I. **Stephen Huston**.  
• Studied sensorimotor integration and context dependent behavior in *Drosophila melanogaster* using optogenetics, immunohistochemistry and confocal microscopy.

	<b>Biological Sciences, Mount Holyoke College</b> Research Assistant. P.I. <b>Craig Woodard</b> .
Jan 2015- Dec 2016	<ul style="list-style-type: none"> <li>• Investigated role of orphan nuclear receptor, <math>\beta</math>FTZ-F1, and neuropeptide secretion of steroid hormone, 20-hydroxyecdysone in development during the metamorphosis of <i>Drosophila melanogaster</i>.</li> <li>• Utilized genetic engineering and molecular biology techniques in conjunction with light and fluorescence microscopy.</li> </ul>
Summer 2015	<b>Center for Cognitive Neuroscience, University of Pennsylvania</b> Undergraduate Research Fellow. P.I. <b>Dr Anjan Chatterjee</b> . <ul style="list-style-type: none"> <li>• In collaboration with <b>Children's Hospital of Pennsylvania</b> and <b>Center for Human Appearance</b>, conducted an independent research project on the social responses to facial appearance, specifically focusing on disfigurement.</li> <li>• Constructed corpus of images of individuals with craniofacial surgeries, experimental design via Qualtrics, data collection via Amazon Mechanical Turk and data visualization.</li> </ul>
March 2014- May 2015	<b>Neuroscience and Behavior, Mount Holyoke College</b> Research Assistant. P.I. <b>Jared Schwartzer</b> . <ul style="list-style-type: none"> <li>• Investigated mice models of autism spectrum disorder with neuroimmunological and behavioral neuroscience techniques with a focus on maternal immune asthma using social approach tasks in BTBR and C57 mice.</li> </ul>
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<b>Papers</b>	Jamrozik, A.; <b>Oraa Ali, M.</b> ; Sarwer, D. & Chatterjee, A.(2017). More than skin deep: Judgments of individuals with facial disfigurement. <i>Journal of Psychology of Aesthetics, Creativity and the Arts</i> .  <b>Oraa Ali, M.</b> ; Fitzroy, A.B. & Breen, M.(2018) Prosody, Poetry and Processing: ERP Evidence for Rhythmic Structure in Silent Reading. <i>Manuscript in preparation</i> .  Rubio-Fernández, P.; Mollica, F.; <b>Oraa Ali, M.</b> & Gibson, E.A.(2018) How do you know that? Automatic belief inferences in passing conversation. <i>Submitted; in review</i> .
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<b>Talks</b>	Presenting Author Indicated with *
July 2018	<b>Oraa Ali, M.</b> , Fitzroy, A.B., & *Breen, M. Prosody, Poetry and Processing: ERP Evidence for Hierarchical Metrical Structure in Silent Reading. <i>15<sup>th</sup> International Conference on Music Perception and Cognition and 10<sup>th</sup> triennial conference of the European Society for the Cognitive Sciences of Music</i> . Montreal, Canada.
March 2018	<b>Oraa Ali, M.</b> , Fitzroy, A.B., & *Breen, M. Prosody, Poetry and Processing: ERP Evidence for Rhythmic Structure in Silent Reading. <i>31<sup>st</sup> Annual CUNY Conference on Human Sentence Processing</i> , University of California, Davis, CA.

May 2017	<b>*Oraa Ali, M.</b> MuSyC: Music, Synaesthesia and Art. <i>Digital Humanities Fellows Showcase, Five College Digital Humanities</i> , Amherst, MA, USA.
Aug 2016	<b>*Oraa Ali, M.</b> ; McCune, C.; Sano, K. MuSyC: Music, Synaesthesia, Colour. <i>Art and Science symposium at the 24<sup>th</sup> Conference of the International Association of Empirical Aesthetics</i> . Universität Wien, Vienna, Austria.
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<b>Posters</b>	
March 2018	<b>*Rubio-Fernández, P.</b> ; <b>*Oraa Ali, M.</b> , Gibson, E.A. Epistemic inferences in passing conversation: Pragmatics as a test of Theory of Mind accounts. <i>31<sup>st</sup> CUNY Sentence Processing Conference</i> . University of California, Davis, USA.
April 2017	<b>*Oraa Ali, M.</b> ; Fitzroy, A.B. & Breen, M. Prosody, Poetry and Processing: ERP Evidence for Rhythmic Structure in Silent Reading. <i>11<sup>th</sup> Cornell Undergraduate Linguistics Colloquium</i> . Cornell University, Ithaca, NY. [absent due to illness]
Aug 2016	<b>*Oraa Ali, M.</b> ;Jamrozik, A.;Sarwer, D. & Chatterjee, A. Interpersonal judgments of individuals with facial disfigurement before & after treatment. <i>24<sup>th</sup> Conference of the International Association of Empirical Aesthetics</i> . Universität Wien, Austria. ● Recipient, <b>Third Best Poster prize</b> .
Aug 2016	<b>*Oraa Ali, M.</b> & Huston, S.J. Behavioral Effects of Single Visual Neuron Stimulation. <i>Janelia Research Symposium, Janelia Research Center</i> , Ashburn, VA.
May 2016	<b>*Oraa Ali, M.</b> ;Jamrozik, A.;Sarwer, D. & Chatterjee, A. Interpersonal judgments of individuals with facial disfigurement before and after treatment. <i>28<sup>th</sup> Annual Convention of the Association for Psychological Science</i> . Chicago, IL. ● Winner, <b>Building Bridges Poster Award</b> , National Institute of Dental & Craniofacial Research, National Institute of Health, USA.
Feb 2016	<b>*Oraa Ali, M.</b> ;Jamrozik, A.;Sarwer, D. & Chatterjee, A. Interpersonal judgments of individuals with facial disfigurement before and after treatment. <i>Northeast Undergraduate Research on Neuroscience (NEURON)</i> . Quinnipiac University, CT.
Feb 2015	<b>*Nanda, P.</b> ;Emerson, F.;Schwartz, A.; <b>Oraa Ali, M.</b> ;Steffens, E. & Schwartz J.J. Maternal Immune Activation & Social Cognition:A model for environment effects on the development of social behavioral deficits in autism spectrum disorders. <i>Northeast Undergraduate Research on Neuroscience (NEURON)</i> . Quinnipiac University, CT.
<b>Demos</b>	
Nov 2016	<b>*Oraa Ali, M.</b> MuSyC: Music, Synaesthesia, Color. <i>Remixing Senses, Tech Expo, Hacking Arts Conference</i> , Massachusetts Institute of Technology, Cambridge, USA.
Aug 2015	<b>*Hafri,A.</b> , <b>*McQuire M.</b> , <b>*Oraa Ali, M.</b> Using eye tracker technology to understand the perception of visual art. <i>ART+SCIENCE: Science After Hours</i> , The Franklin Institute, Philadelphia, PA.

## Awards

2017	<b>Sue Barry Award</b> , Mount Holyoke College <ul style="list-style-type: none"><li>• Awarded to one graduating senior every year for demonstrating "<i>vision, joy and curiosity</i>" in the pursuit of research in science.</li></ul>
2017	<b>Phi Beta Kappa</b> , Mount Holyoke College
2017	<b>Mary Lyon Scholar</b> , Mount Holyoke College
2016, 2017	<b>Award of Academic Excellence: Neuroscience &amp; Behaviour</b> , Mount Holyoke College, USA
Nov 2016	<b>Finalist, Hacking Arts Hackathon</b> , MIT Media Lab, USA
Aug 2016	<b>Robert Frances Award - Outstanding Student Research Contribution</b> International Association of Empirical Aesthetics, Vienna, Austria
May 2016	<b>NIDCR Building Bridges Travel Award</b> , National Institute of Health, USA
May 2016	<b>Margaret Chambers Gould Award</b> , Mount Holyoke College <ul style="list-style-type: none"><li>• Awarded to one senior every year for outstanding pursuit of independent research in biological sciences.</li></ul>
May 2016	<b>Student Caucus Travel Award</b> , Association of Psychological Science, USA
Feb 2016	<b>Most Interdisciplinary Project: MuSyC</b> , across themes of Brain & Development, Artificial Intelligence, Life Hacks and Environment. Hampshire Hackathon, Hampshire College, USA
<b>Grants &amp; Fellowships</b>	<b>Harap Fund Grant for Independent Research</b> , Mount Holyoke College <ul style="list-style-type: none"><li>• Four time recipient (May 2018, Feb 2018, Jan 2017, May 2016) for pursuit of independent research and travel.</li></ul>
2013 - 2017	<b>21<sup>st</sup> Century Scholarship for Academic Excellence</b> , Mount Holyoke College
2013 - 2017	<b>Mary Lyon Grant for Leadership and Achievement</b> , Mount Holyoke College
2016-2017	<b>Five College Digital Humanities Student Fellowship</b> , The Andrew W. Mellon Foundation, MA
Oct 2016, Jan 2016	<b>MakerSpace Grant</b> , Mount Holyoke College <ul style="list-style-type: none"><li>• Two time recipient for development of MuSyC prototype.</li></ul>
Summer 2015	<b>Five College Digital Humanities Microgrant</b> , Five College Consortium, MA
Summer 2015	<b>LYNK-UAF Grant - Pursuit of Scientific Research</b> , Mount Holyoke College

<b>Teaching</b>	<b>English, Africana Studies and Critical Social Thought, Mount Holyoke College</b>
Spring 2017	Teaching Assistant, <b>Visual Culture of Protest.</b> <ul style="list-style-type: none"> <li>• Provided technical, design and research support for the course.</li> </ul>
Fall 2014- Spring 2015	<b>Neuroscience and Behavior, Mount Holyoke College</b> Tutor, <b>Introduction to Neuroscience and Behavior.</b> <ul style="list-style-type: none"> <li>• Mentored a class of 27 students and offered one on one tutoring sessions.</li> </ul>
Spring 2016	<b>Biological Sciences, Mount Holyoke College</b> Teaching Assistant, <b>Cell Biology.</b> <ul style="list-style-type: none"> <li>• Taught scientific techniques such as epifluorescence microscopy, protein purification and polymer chain reaction to group of 50 students.</li> </ul>
Fall 2014, Spring 2015	<b>Psychology and Education, Mount Holyoke College</b> Teaching Assistant, <b>Statistics for Psychology.</b> <ul style="list-style-type: none"> <li>• Taught fundamental statistical concepts and provided academic support to a class of 72 students.</li> </ul>
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<b>Service &amp; Outreach</b>	<b>Student Liaison, Neuroscience and Behavior, Mount Holyoke College</b>
2016-2017	<ul style="list-style-type: none"> <li>• Provided mentorship to peers about pursuing research in neuroscience, course planning and academic strategies.</li> </ul>
2014-2017	<b>Student Resource, AccessAbility Services, Mount Holyoke College in Organic Chemistry, Research Methods in Psychology, Cognitive Psychology, Evolution and Neurobiology.</b> <ul style="list-style-type: none"> <li>• Provided peer academic support to students with AccessAbility needs.</li> </ul>
2015-2016	<b>Co-President, Neuroscience Student Forum, Mount Holyoke College</b> <ul style="list-style-type: none"> <li>• Helped organize regular meetings to discuss topics and themes in neuroscience.</li> <li>• Curated a collaborative neuroscience related art exhibition for Brain Awareness week entitled: "<i>Synapse: Bridging the Gap Between Art and Science</i>".</li> </ul>
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<b>Professional Experience</b>	<b>Student Archivist, Archives &amp; Special Collections, Mount Holyoke College</b>
2015-2017	<ul style="list-style-type: none"> <li>• Curated an exhibition for the 40<sup>th</sup> anniversary of LGBTQ+ college organizations.</li> <li>• Catalogued the feminist zine collection followed by digital data visualization.</li> </ul>
Summer 2016	<b>Summer Student Fellow, Five College Digital Humanities</b> <ul style="list-style-type: none"> <li>• Created and curated a digital archive and directory of courses related to digital humanities in the Five College network.</li> </ul>
2012-2013	<b>Journalist, Science &amp; Technology, Deccan Chronicle, India</b> <ul style="list-style-type: none"> <li>• Wrote articles about contemporary issues in science &amp; tech for a national newspaper.</li> </ul>

**Languages** English (native), Hindi (native), Urdu(fluent), Sanskrit(reading), French(reading)  
Spanish(basic), German(basic)

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**Technical Skills** **Programming:**  
**Most Experience** with R, JavaScript, HTML + CSS  
**Some Experience** with Python, Bash, EPrime, Arduino, MATLAB, L<sup>A</sup>T<sub>E</sub>X

**Software:** Amazon Mechanical Turk, Praat, Gephi, Photoshop, SPSS, Excel, Adobe Illustrator, StoryMap JS, Qualtrics, Mesquite, ImageJ<sup>++</sup> FIJI, Ethovision

**Cognitive Neuroscience:** Event-related potential(ERP), corpus construction. Basic experience with eye-tracking, functional magnetic resonance imaging (fMRI).

**Molecular Neuroscience:** Basic experience with optogenetics, stereotaxic surgery for neurotoxin lesioning, immunohistochemistry, quantitative polymerase chain reaction (qPCR).

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**Art Shows** **“Curiouser & Curiouser: An Experimental Exhibition about Paintbrushes & Petridishes”**. (2016). Solo Exhibition, Experimental Art Gallery, Delhi, India.

**“Synapse: Bridging the Gap Between Art and Science”**. (2016). Group Exhibition, Blanchard Art Gallery, South Hadley, MA, USA.

**“Women Artists for Women Artists” - Olympia Art Collective**. (2016). Group Exhibition, Northampton, MA, USA.

**“Curiouser and Curiouser: Integrating Art and Science”**. (2016). Solo Exhibition, Blanchard Art Gallery, South Hadley, MA, USA.

**“Presenting Olympia” - Olympia Art Collective**. (2015). Group Exhibition, Mount Holyoke Art Studio, South Hadley, MA, USA.

**“EcoFestival, Exhibition by Professional Artists” - Kriti**. (2011). Alliance Francaise de Delhi, New Delhi, India.

**“1. International Izmir Modern Arts” - Bienal Izmir**. (2011). Izmir, Turkey.

**“International Exhibition of Contemporary Arts” - Biennale Chianciano**. (2009). Museo d’Arte, Chianciano Terme, Italy.

**“More Than Meets The Eye”**. (2007). Solo Exhibition, Convention Centre Foyer, India Habitat Center, Delhi, India.