Sofia Serafina Riskin

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Smith College Neuroscience & Philosophy student. **MIT Brain & Cognitive Sciences** RA (3y, 3mo). Planning to pursue MD/PhD in pediatric specialty & developmental cognitive neuroscience. Experienced with national conference poster presentations, data analysis (R Studio), data collection (fMRI & behavioral), lit review, mentorship, & report writing. Classically trained violist (musician: 18 y) instilled values of collaboration, critical thinking, discipline, empathy, leadership, & performance.

EDUCATION

Expected 2024 — **Smith College**
A.B., Neuroscience – *major*, Philosophy – *minor*
Relevant Coursework:
NSC: Seminar in Neurodegenerative Disease · Research Methods: Cellular Signaling · Human NSC Exp Methods in NSC (w lab) · Fundamentals of NSC **CHM**: Organic I (w lab) · General (w lab) **BIO**: Developmental Biology · Genomes & Genetic Analysis (w lab) · Animal Physiology · Molecules, Cells, & Systems **ADD'L**: Prob & Stats (w lab) · Research Methods · Calc II

Winning Grant Proposal, Smith College
Voted winning grant proposal with designation: "potentially transformative" (out of 17 total grants written by students) in advanced lecture course, Developmental Biology, Fall 2023. Grant titled, "Human Oligodendrocyte Spheroid Model: Hypoxic-Ischemic Encephalopathy".

RESEARCH ASSISTANT

Dec 2020 – Oct 2023 — **Massachusetts Institute of Technology**, Department of Brain & Cognitive Sciences
Early Childhood Cognition Lab, PI: Dr. Laura Schulz
Mentor: Dr. Junyi Chu
Lead RA: study on decision-making in preschoolers (2.5 yrs). Submitted applications for poster presentations & presented at 2 national conferences. Assisted project lead in writing journal article for submission: lit review, abstract, & methods. Organized, analyzed, & visualized data using R Studio & communicated findings to project lead. Behavioral data collection (Zoom). Conceptual development of study, stimuli creation, & counterbalanced materials. Co-mentored undergraduates in data collection. Co-mentored high school students in data processing. Create & implement strategies for recruitment. Video & behavioral data processing for 3 studies.

May – Aug 2023
May – Aug 2022 — **Massachusetts Institute of Technology**, Department of Brain & Cognitive Sciences
Social Cognitive Neuroscience Lab, PI: Dr. Rebecca Saxe
Mentor: Dr. Halie Olson
Lead RA: fMRI data collection on language processing in toddlerhood. Helped to ensure the comfort of family & participant. Set-up & cleaned MRI machine before & after session. Paid close attention to the project lead throughout each session to anticipate what may be needed for the child & for the session to run smoothly. Helped to mentor RAs who were learning how to collect data for this study (how to interact with the family & participant, detailed, multi-step process of session, & how to set-up & clean MRI machine). Different study: analyzed dataset using multiple regression & Bayesian stats in R Studio (I taught myself how to do these analyses). Reported my findings to project leads. Helped with lit review. Presented to lab (40min) on empirical research article. Asked questions & actively participated throughout lab meetings & events.

May – Aug 2020 — **Massachusetts Institute of Technology**, Department of Brain & Cognitive Sciences
Ev Fedorenko's Language Lab, PI: Dr. Ev Fedorenko
Mentor: Dr. Rachel Ryskin
Data processing for extensive language production & language comprehension data sets (6,465 & 6,401 sentence entries). Carefully parsed through each entry for number of: correct words, typos, partial words, & target words. Several researchers had tried to complete this project, & I was the first to do so successfully. Created inventory of data processing guidelines for future coders. Presented to the lab on study as a whole & how my contribution furthered its progress.

REFEREED CONFERENCE POSTERS

Riskin, S. S., Chu, J., & Schulz, L. E. (2022, April). *Do preschoolers engage in rational non-reconsideration?* Poster presented at the 2022 Cognitive Development Society Biennial Conference, Madison, WI.

Riskin, S. S., Chu, J., & Schulz, L. E. (2021, November). *How goals constrain children's adoption of costs*. Poster presented at the Harvard University Women in Psychology's Annual Trends in Psychology Summit (Virtual).

FUNDING

June 2022 — Praxis: The Liberal Arts at Work (**$3000**), Smith College

MENTORING & TEACHING

Feb 2021 – May 2023 — **Co-Mentor**: MIT Early Childhood Cognition Lab
Four undergrads conducting data collection with preschoolers. Four undergrads & eight high school interns: coders on infant intuitive physics. Co-lead one-hour discussion on an empirical article in summer reading group held for lab community. Held weekly office hours. Planned & led résumé workshop. Contributed to Internship Handbook: resources section.

Fall 2021 – Spring 2022 — **STEM Mentor**: Science Club for Girls (NPO in Cambridge, MA)
STEM mentor to junior mentor & ten scientists (grades 6-8) from underrepresented communities in greater Boston area. Teach weekly curriculum over Zoom. Engage & lead girls in experiments while building critical thinking, teamwork, & confidence. The Fall 21 focus was the human body (systems: nervous, respiratory, digestive, circulatory, musculoskeletal, & immune). At the end of the fall, the young scientists were able to synthesize learning & act as doctors in order to diagnose a pretend patient's symptoms.

Spring 2019 — **Teaching Assistant**: 'Human Rights in Motion,' Teacher: Anjali Bhatia
History Department, The Cambridge School of Weston (high school)
Developed & implemented a four-day lesson plan that is used in the current class structure as a cornerstone of the curriculum. Designed research projects & homework assignments. Taught a 90-minute class period. Assisted students with papers, presentations, & projects. Note-taker for class lectures & student contributions.

MUSIC

Continuing Fall 2024 — **Private Lessons for Classical Viola**
Fall 2011 – Spring 2020 — Studying classical viola (ear training, music theory, memorization).

Fall 2020 – Fall 2022 — **WOZQ 91.9 FM Smith College Radio**
Produce & host two hour/week global jazz radio show, titled "Memos From the World."

Fall 2019 – Spring 2021 — **Smith College Orchestra**
Principal violist. During COVID-19 pandemic: One of five students selected to lead weekly discussions & sectional rehearsals. Liaison between viola section & orchestra / conductor.

Fall 2013 – Spring 2019 — **New England Conservatory Preparatory School**
Participation highlights: String Chamber Orchestra (highest level). Baroque Chamber Orchestra (highest level). Performances two-four times per year for 100+ people.

TECHNICAL SKILLS

Developmental Cognitive Neuroscience & Developmental Psychology
Data Analysis · R Studio · Data Collection (fMRI & Behavioral) · Lit Review · Poster Presentation · Report Writing · Mentorship
Conceptual & Stimuli Development · Data processing: Eye-tracking (VCode & VData) & Transcription (CLANc)

Neuroscience Wet Lab
Sterile cell culture · Transfection (overexpression and siRNA) · Immunocytochemistry · Cellular signaling & functioning assays
Class research projects: 1) Utilized overexpression and silencing system to test potential small molecule agonists for GPR37
2) Impact of microplastics crossing blood-brain barrier in the *Danio rerio* embryo

PERSONAL INTERESTS

Ethnomusicology · Jazz · Opera · Biking · Strength Training · Meditation · Performances: jazz & classical