

Contact Information	email: ikuperwajs@nyu.edu web: ionatankuperwajs.github.io phone: 425-283-2084																								
Research Interests	<p>My research interests lie at the intersection of cognition and computation. I primarily use tools from artificial intelligence and reinforcement learning to infer what algorithms people use to plan sequences of actions in complex environments. My thesis work is on developing a normative framework for meta-planning and training deep neural networks to reproduce human play in a large-scale combinatorial game.</p>																								
Education	<div> <div> Ph.D. Candidate in Neural Science <i>New York University (New York, NY)</i> Systems, Cognition, and Computation Track </div> <div>2018-Present</div> </div> <div> <div> B.A. in Neuroscience, Computer Science, & Mathematics <i>Macalester College (St. Paul, MN)</i> Honors in Mathematics, Magna Cum Laude </div> <div>2014-2018</div> </div>																								
Publications	<p>Preprints</p> <ul style="list-style-type: none"> van Opheusden, B., Galbiati, G., Kuperwajs, I., Bnaya, Z., Li, Y., & Ma, W.J. (2021). Revealing the impact of expertise on human planning with a two-player board game. <i>PsyArXiv</i>. pdf <p>Conference articles</p> <ul style="list-style-type: none"> Kuperwajs, I. & Ma, W.J. (2021). Planning to plan: a Bayesian model for optimizing the depth of decision tree search. <i>CogSci</i>. pdf Kuperwajs, I., van Opheusden, B., & Ma, W.J. (2019). Prospective planning and retrospective learning in a large-scale combinatorial game. <i>Cognitive Computational Neuroscience</i>. pdf 																								
Honors & Awards	<table> <tr> <td>NSF Graduate Research Fellowship</td> <td>2020-2023</td> </tr> <tr> <td>CCN Trainee Travel Grant</td> <td>2019</td> </tr> <tr> <td>Henry Mitchell McCracken Fellowship</td> <td>2018</td> </tr> <tr> <td>Phi Beta Kappa National Honor Society</td> <td>2018</td> </tr> <tr> <td>Macalester College Neuroscience Outstanding Graduate Award</td> <td>2018</td> </tr> <tr> <td>Cosyne Undergraduate Travel Grant</td> <td>2018</td> </tr> <tr> <td>IBRO-Simons Computational Neuroscience Imbizo</td> <td>2018</td> </tr> <tr> <td>Macalester College Dean's List</td> <td>2014-2018</td> </tr> <tr> <td>Janelia Undergraduate Scholars Program</td> <td>2017</td> </tr> <tr> <td>MIAC Men's Soccer Academic All-Conference Team</td> <td>2015-2017</td> </tr> <tr> <td>NYU Center for Neural Science NSF REU Fellowship</td> <td>2016</td> </tr> <tr> <td>Macalester College DeWitt Wallace Distinguished Scholar</td> <td>2014</td> </tr> </table>	NSF Graduate Research Fellowship	2020-2023	CCN Trainee Travel Grant	2019	Henry Mitchell McCracken Fellowship	2018	Phi Beta Kappa National Honor Society	2018	Macalester College Neuroscience Outstanding Graduate Award	2018	Cosyne Undergraduate Travel Grant	2018	IBRO-Simons Computational Neuroscience Imbizo	2018	Macalester College Dean's List	2014-2018	Janelia Undergraduate Scholars Program	2017	MIAC Men's Soccer Academic All-Conference Team	2015-2017	NYU Center for Neural Science NSF REU Fellowship	2016	Macalester College DeWitt Wallace Distinguished Scholar	2014
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Teaching Experience	<p>Teaching Assistant, New York University</p> <ul style="list-style-type: none"> Mathematical Tools for Neural and Cognitive Science (NEURL-GA 2201) F 19 <p>Teaching Assistant, Macalester College</p> <ul style="list-style-type: none"> Algorithm Design and Analysis (COMP 221) F 17, S 18 																								

	<ul style="list-style-type: none"> • Brain, Mind, and Behavior (PSYC 180) F 16 • Core Concepts in Computer Science (COMP 123) S 16, F 16 	
Talks	<p>Cognitive Science Society 2021 <i>University of Vienna (Vienna, Austria)</i> Planning to plan: a Bayesian model for optimizing the depth of decision tree search</p> <p>Center for Neural Science Seminar Series 2020 <i>New York University (New York, NY)</i> Model-based and model-free decision-making in a complex planning task</p> <p>Concepts and Categories Seminar Series 2019 <i>New York University (New York, NY)</i> Human planning in large state spaces</p> <p>Artificial and Biological Computation Lab 2019 <i>New York University (New York, NY)</i> Combinatorial planning</p>	
Poster Presentations	<p>Workshop on Big Data in Cognitive Science 2019 <i>Princeton University (Princeton, NJ)</i> Prospective planning and retrospective learning in a large-scale combinatorial game</p> <p>Cognitive Computational Neuroscience 2019 <i>Technical University of Berlin (Berlin, Germany)</i> Prospective planning and retrospective learning in a large-scale combinatorial game</p>	
Outreach & Service	<p>Science Activism</p> <ul style="list-style-type: none"> • President, Science Action and Advocacy Network (ScAAN) 2018-Present • Workshop on evidence-based advocacy, American Geophysical Union 2021 • Workshop on science activism, Rockefeller University 2021 • Panel on science activism, Growing Up in Science 2020 <p>Academic Mentoring</p> <ul style="list-style-type: none"> • Ashley Yan, Stevenson High School Student 2021 	
Leadership	<p>Commencement Speaker Selection Committee, Macalester College 2018</p> <p>Software Development Organization, Macalester College 2015-2018</p> <p>Varsity Men's Soccer Team, Macalester College 2014-2018</p>	
Skills & Service	<p>Programming: Python, MATLAB, R, Java, C, C++, HTML/CSS, bash</p> <p>Graduate Coursework: Math tools for neuroscience, machine learning, Bayesian and cognitive modeling, cellular and systems neuroscience</p> <p>Methodologies: Behavioral modeling, reinforcement learning, statistical inference, deep learning</p> <p>Lab: Psychophysics, fMRI</p> <p>Languages: English, Spanish, Hebrew</p> <p>Interests: Photography, podcasting, travel, hiking, soccer, basketball, coffee</p>	