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| **NICASIA BEEBE-WANG** | | | | | nicasia.github.io  nbbwang@cs.washington.edu | | | | | | |
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| **EDUCATION** | | | | | | | | | | | |
| **University of Washington** | | | | | | | Seattle, WA | | | | |
| PhD Student, Computer Science and Engineering | | | | | | |  |  |  | 2017 - Present | |
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| M.S. of Computer Science and Engineering | | | | | | |  |  |  | 2019 | |
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| *Advisor*: Su-In Lee | | | | | | |  |  |  |  |  |
| *Research interests:* machine learning with applications in health and biology | | | | | | | | | | | |
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| **Harvard University** | | | | | | | Cambridge, MA | | | | |
| B.A. Computer Science (Mind, Brain, and Behavior Honors Track), minor in Statistics | | | | | | | | | | | 2017 |
| Honors: *cum laude* in field | | | | | | |  |  |  |  |  |
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| **EXPERIENCE** | | | | | | | | | | | |
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| **Paul Allen School of Computer Science & Engineering, University of Washington** | | | | | | | | | Seattle, WA | | |
| *Graduate Research Assistant* | | | | | | 2017 - Present | | | | | |
| * PhD student in Computer Science and Engineering, employing machine learning models and interpretability methods for biological and medical problems. Advised by Professor Su-In Lee. | | | | | | | | | | | |
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| **Recursion Pharmaceuticals** | | | | | | | | | Salt Lake City, UT | | |
| *Data Science Intern* | | | | | | | | | Autumn, 2021 | | |
| * Developing machine learning models for analyzing high-throughput gene expression datasets and incorporating them with Recursion's imaging-based assays. | | | | | | | | | | | |
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| **Facebook** – Dangerous Content Team | | | | | | | | | Seattle, WA | | |
| *Machine Learning Software Engineer Intern* | | | | | | | | | Summer, 2020 | | |
| * Developed a data processing and ML pipelines to identify networks of bad actors for the Dangerous Content team. | | | | | | | | | | | |
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| **Harvard University Department of Molecular and Cellular Biology** | | | | | | | | | Cambridge, MA | | |
| *Undergraduate Research Fellow* | | | | | | | 2016 - 2017 | | | | |
| * Employed deep learning pipelines to process large, next-generation sequencing data on Harvard's high-performance computing cluster. Advised by Professor Sean Eddy and Peter Koo. | | | | | | | | | | | |
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| **Beth Israel Deaconess Medical Center, Center for Sleep and Cognition** | | | | | | | | | Boston, MA | | |
| *Undergraduate Research Fellow* | | | | | | | 2015 - 2016 | | | | |
| * Led a study to collect and analyze polysomnography and EEG datasets to investigate the relationship between dysfunctional sleep architecture and abnormal neural responses to stimuli. | | | | | | | | | | | |
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| **Mt. Sinai Medical School: Neuropsychoimaging of Addiction & Related Conditions Group** | | | | | | | | | | New York, NY | |
| *Undergraduate Research Fellow* | | | | | | | Summer, 2014 | | | | |
| * Integrated genetic and fMRI datasets to identify key relationships between a proenkephalin gene polymorphism, error processing, and behavioral traits in cocaine-addicted individuals. | | | | | | | | | | | |
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| **Neuropsychoimaging Group, Brookhaven National Laboratory** | | | | | | | | | | Upton, NY | |
| *Research Assistant* | | | | | | | 2011 - 2013 | | | | |
| * Investigated the relationship between single nucleotide polymorphisms in the dopamine transporter gene and neural responses to drug-related stimuli via EEG. * Analyzed longitudinal data from cocaine addicted individuals to identify predictors of relapse. | | | | | | | | | | | |
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| **PUBLICATIONS AND PROJECTS** | | | | | | | | | | | |
|  | | | | | | | | | | | |
| **Nicasia Beebe-Wang,** Ayse B. Dincer, Su-In Lee. “An automatic integrative method for learning interpretable communities of  biological pathways.” *NAR Genomics and Bioinformatics*, 2022. | | | | | | | | | | | |
|  | | | | | | | | | | | |
| Ethan Weinberger, **Nicasia Beebe-Wang,** Su-In Lee. “Moment matching deep contrastive latent variable models.” *25th*  *International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2022. | | | | | | | | | | | |
| **Nicasia Beebe-Wang**,Safiye Celik, Ethan Weinberger, Pascal Sturmfels, Philip De Jager, Sara Mostafavi S\*, and Su-In Lee\*.  “Unified AI framework to uncover deep interrelationships between gene expression and Alzheimer’s disease  neuropathologies.” *Nature Communications,* 2021. | | | | | | | | | | | |
|  | | | | | | | | | | | |
| **Nicasia Beebe-Wang\***, Alex Okeson\*, Tim Althoff\*\*, and Su-In Lee\*\*. “Efficient and Explainable Risk Assessments for  Imminent Dementia in an Aging Cohort Study.” *IEEE Journal of Biomedical and Health Informatics*, 2021*.* | | | | | | | | | | | |
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| **Nicasia Beebe-Wang**,Safiye Celik, Pascal Sturmfels, Sara Mostafavi S\*, and Su-In Lee\*. “MD-AD: Multi-task deep learning  for Alzheimer’s disease neuropathology.” *ICML Workshop on Computational Biology*, 2019 (Spotlight Talk). | | | | | | | | | | | |
|  |  |  |  |  | | |  |  |  |  |  |
| **Nicasia Beebe-Wang**. “Towards Learning Regulatory Elements of Promoter Sequences with Deep Learning.” Harvard  University, Undergraduate honors thesis, 2017. | | | | | | | | | | | |
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| Scott Moeller, **Nicasia Beebe-Wang**, Kristin Schneider, Anna Konova, Muhammad Parvaz, Nelly Alia-Klein, Yasmin Hurd, and Rita Z. Goldstein. “Effects of an opioid (proenkephalin) polymorphism on neural response to errors in health and cocaine use disorder.” *Behavioural Brain Research*, 2015. | | | | | | | | | | | |
|  |  |  |  |  | | |  |  |  |  |  |
| Scott Moeller, Muhammad Parvaz, Elena Shumay, Salina Wu, **Nicasia Beebe-Wang**, Anna Konova, Michail Misyrlis, Nelly Alia-Klein, and Rita Z. Goldstein. “Monoamine polygenic liability in health and cocaine dependence: Imaging genetics study of aversive processing and associations with depression symptomology.” *Drug and Alcohol Dependence*, 2014. | | | | | | | | | | | |
|  |  |  |  |  | | |  |  |  |  |  |
| Scott Moeller, **Nicasia Beebe-Wang**, Patricia Woicik, Anna Konova, Thomas Maloney, and Rita Z. Goldstein. “Choice to view cocaine images predicts concurrent and prospective drug use in cocaine addiction.” *Drug and Alcohol Dependence*, 2013. | | | | | | | | | | | |
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| Scott Moeller, Muhammad Parvaz, Elena Shumay, **Nicasia Beebe-Wang**, Anna Konova, Nelly Alia-Klein, Nora D. Volkow,  and Rita Z. Goldstein. “Gene × abstinence effects on drug cue reactivity in addiction: multimodal evidence.” *Journal of*  *Neuroscience*, 2013. | | | | | | | | | | | |
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| **SELECTED AWARDS & ACHIEVEMENTS** | | | | | | | | | | | |
| Microsoft Research PhD Fellowship Departmental Nomination | | | | | | | | | | 2019 | |
| CRA-W Grad Cohort Workshop Participant | | | | | | | | | | 2018 | |
| Jeff Dean - Heidi Hopper Endowed Regental Fellowship in Computer Science & Engineering | | | | | | | | | | 2017-2018 | |
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| **TEACHING** | | | | | | | | | | | |
| *Computational Biology* (Teaching Assistant) | | | | | | | | | | Winter, 2020 | |
| *Machine Learning for Big Data* (Teaching Assistant) | | | | | | | | | | Spring, 2019 | |
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| **ACTIVITIES** | | | | | | | | | | | |
| **Service & Leadership** | | | | | | | | | |  | |
| *Grad, VGrad, & Postdoc Advisory Council (G5PAC)* | | | | | | | | | | 2019 – 2021 | |
| * Meet regularly with Allen School leadership about policies & issues related to masters students, PhD students, and postdoctoral researchers in the Allen School. | | | | | | | | | | | |
| *Women's Events Coordinator* | | | | | | | | | | 2019 – 2021 | |
| * Organize quarterly events to promote community among women and non-binary individuals in the department | | | | | | | | | | | |
| *New Graduate Student Orientation Committee* | | | | | | | 2018 | | | | |
| * Organize welcome events that help incoming PhD students learn about campus resources, departmental policies, and opportunities for community involvement. | | | | | | | | | | | |
| *Reviewer* | | | | | | | | | | | |
| * Machine Learning in Computational and Systems Biology track at ISMB, 2020 * Neural Information Processing Systems (NeurIPS), 2021 and 2022 | | | | | | | | | | | |
| **Mentorship** | | | | | | |  | | | | |
| *Society for Women Engineers Mentor* | | | | | | | 2017 - 2018 | | | | |
| * Advise undergraduate women at the University of Washington who aspire to pursue engineering careers. | | | | | | | | | | | |
| *UW CSE Peer Mentor* | | | | | 2018 - Present | | | | | | |
| * Meet monthly with new PhD students to offer advice and experiences with adjusting to graduate school. | | | | | | | | | | | |