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| Nicasia Beebe-Wang | https://nicasia.github.io  nbbwang@cs.washington.edu |

Summary of qualifications

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| **University of Washington** |  |
| Ph.D. Candidate, Computer Science and Engineering | 2017-2022 |
| *Research:* machine learning with applications in health and biology | (Expected) |
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| M.S. Computer Science and Engineering | 2019 |
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| **Harvard University** |  |
| B.A. Computer Science (Mind, Brain, and Behavior Honors Track;   *cum laude* in field), minor in Statistics | 2017 |
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EXPERIENCE

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| **University of Washington** |  |
| Graduate Research Assistant (advised by Su-In Lee) | 2017-Present |
| * Leveraging machine learning, deep learning, and interpretability methods for systems biology problems.   Developing |  |
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| **Recursion Pharmaceuticals** |  |
| *Data Science Intern* | Autumn, 2021 |
| Developed machine learning models for analyzing high-throughput gene expression datasets and deep learning architectures to incorporate them with Recursion's imaging-based assays. |  |
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| **Facebook** |  |
| *Machine Learning Software Engineer Intern |* Dangerous Content Team | Summer, 2020 |
| Developed data processing & machine learning pipelines to identify networks of bad actors on the platform. |  |

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| **EXPERIENCE** | | | | | | | | | | |
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| **Harvard University** | | | | | | | | Cambridge, MA | | |
| *Undergraduate Research Fellow |* Department of Molecular and Cellular Biology | | | | | | | | 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. Undergraduate honors thesis: “Towards Learning Regulatory Elements of Promoter Sequences with Deep Learning” | | | | | | | | | | |
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| **Beth Israel Deaconess Medical Center** | | | | | | | | Boston, MA | | |
| *Undergraduate Research Fellow |* Center for Sleep and Cognition | | | | | | 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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| **Neuropsychoimaging of Addiction Group** | | | | | | | | | New York, NY | |
| *Undergraduate Research Fellow |* Mt. Sinai Medical School | | | | | | Summer, 2014 | | | | |
| Integrated genetic and fMRI datasets to identify relationships between single nucleotide polymorphisms, error processing, and behavioral traits in cocaine-addicted individuals, resulting in a publication in *Drug and Alcohol Dependence* (2015). | | | | | | | | | | |
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| *Research Assistant |* Brookhaven National Laboratory | | | | | | | | | 2011-2013 | |
| Performed data analysis to investigate relationships among single nucleotide polymorphisms, EEG, and longitudinal data from cocaine addicted individuals to identify predictors of relapse, resulting in 3 journal publications. | | | | | | | | | | |
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| **SELECTED PUBLICATIONS (see website for full list)** | | | | | | | | | | |
|  | | | | | | | | | | |
| **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.   * Selected for highlight talk at *RECOMB*, 2022 * Spotlight talk presented at *ICML Workshop on Computational Biology*, 2019 (Travel Award) | | | | | | | | | | |
|  | | | | | | | | | | |
| **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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| 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, **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 | |
| Met 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 | |
| Organized quarterly events to promote community among women and non-binary researchers in the department | | | | | | | | | | |
| *New Graduate Student Orientation Committee* | | | | | | 2018 | | | | |
| Organized welcome events that help incoming PhD students learn about campus resources, departmental  policies, and opportunities for community involvement. | | | | | | | | | | |
| *Conference reviewing* | | | | | | | | | | |
| * 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 | | | | |
| Advised undergraduate women at the University of Washington who aspire to pursue engineering careers. | | | | | | | | | | |
| *UW CSE Peer Mentor* | | | | | 2017-2022 | | | | | |
| Meet monthly with new PhD students to offer advice and experiences with adjusting to graduate school. | | | | | | | | | | |