

# ANDREW JONES

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## EDUCATION

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<b>Princeton University</b> • Princeton, NJ PhD, <i>Computer Science</i> Advisor: Barbara E. Engelhardt	2019 – present
<b>Brown University</b> • Providence, RI MSc, <i>Computer Science</i> Advisor: Thomas Serre	2016 – 2017
<b>Brown University</b> • Providence, RI BSc, <i>Neuroscience</i>	2012 – 2016

## RESEARCH

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<b>Graduate Researcher</b> – Princeton University Princeton, NJ <ul style="list-style-type: none"><li>Currently developing statistical and machine learning tools to analyze high-dimensional biomedical data.</li></ul>	2019 – Present
<b>Associate Computational Biologist</b> – Broad Institute of MIT and Harvard Cambridge, MA <ul style="list-style-type: none"><li>Built statistical tools to study the transcriptional patterns of cancer cells that are targeted by small molecule therapies, resulting in a first-author manuscript and a conference presentation.</li><li>Other projects included analyzing drug-perturbed single-cell RNAseq data and a project building a computational tool to align the transcriptomes of cancer cell lines and patient tumors.</li></ul>	2018 – 2019
<b>Graduate Research Assistant</b> – Brown University Providence, RI <ul style="list-style-type: none"><li>Developed computer vision models for analyzing the eye gaze patterns of children with Autism Spectrum Disorder, resulting in a Master's Report paper.</li></ul>	2016 – 2017
<b>Undergraduate Research Assistant</b> – Brown University Providence, RI <ul style="list-style-type: none"><li>The BrainGate lab develops brain-computer interfaces (BCIs) for patients with tetraplegia, with the aim of restoring these patients' communication and mobility</li><li>Created a tool to improve the patients' control of the speed of a computer cursor while using the BCI, and shared my findings in my undergraduate honors thesis.</li></ul>	2014 – 2016

## TEACHING AND SERVICE

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<b>Teaching Assistant</b> – COS424 (Fundamentals of ML), Princeton University	Spring 2021
<b>Teaching Assistant</b> – COS126 (Intro. Computer Science), Princeton University	Fall 2020
<b>Undergraduate Research Mentor</b> – Princeton University	2020 – Present
<b>Reviewer</b> – Nature Methods	2021 – Present
<b>Contributing writer</b> – Princeton Insights	2020 – Present
<b>Research Mentor</b> – Broad Institute Summer Scholars Program	Summer 2018
<b>Lead TA</b> – Computational Vision, Brown University	Fall 2015
<b>Meiklejohn Peer Advisor</b> – Brown University	2013-2016

## AWARDS AND FELLOWSHIPS

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Broad Institute Travel Award	2018
Neuroscience Honors, Brown University	2016
Sigma Xi Honor Research Society	2016
Undergraduate Teaching and Research Award	2015

- **A Jones**, FW Townes, D Li, BE Engelhardt. "Contrastive latent variable modeling with application to case-control sequencing experiments." arXiv:2102.06731 (2021).
- Y Cohen-Sharir, et al. "Selective vulnerability of aneuploid human cancer cells to inhibition of the spindle assembly checkpoint." Nature (2021): 1-6.
- D Li\*, **A Jones**\*, BE Engelhardt. "Probabilistic Contrastive Principal Component Analysis." arXiv:2012.07977 (2020).
- **A Jones**, A Tsherniak, JM McFarland. "Post-perturbational transcriptional signatures of cancer cell line vulnerabilities." BioRxiv (2020).
- JM McFarland, et al. "Multiplexed single-cell transcriptional response profiling to define cancer vulnerabilities and therapeutic mechanism of action." Nature Communications 11.1 (2020): 1-15.
- A Warren, **A Jones**, T Shibue, WC Hahn, JS Boehm, F Vazquez, A Tsherniak, JM McFarland. "Global computational alignment of tumor and cell line transcriptional profiles." BioRxiv (2020).
- **A Jones**, JM McFarland, M Kocak, A Tsherniak. "Predicting small molecule mechanism of action from transcriptional profiles using deep neural networks." Deep Learning to Accelerate Drug Discovery (2018).
- **A Jones**, T Serre. Computational modeling of visual saliency and attention in the Smart Playroom. 2017 Computer Science Master's Paper (2018).
- DE Warren, MJ Sutterer, J Bruss, TJ Abel, **A Jones**, H Kawasaki, M Voss, M Cassell, MA Howard, D Tranel. "Surgically disconnected temporal pole exhibits resting functional connectivity with remote brain regions." bioRxiv (2017): 127571.
- **A Jones**, D Milstein, L Hochberg, B Jarosiewicz. "Inferring intended speed from curvature as a means to improve decoding in brain-computer interfaces for people with paralysis." Neuroscience Honors Thesis (2016).

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TALKS

- *Predicting small molecule mechanism of action from transcription* (2018). Broad Institute/Dana Farber Cancer Program Meeting.
- *TensorFlow Tutorial* (2018) Broad Institute, Cancer Data Science. I organized and led a full-day TensorFlow tutorial and workshop.

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EMPLOYMENT

<b>Data Science Intern</b> – AthenaHealth	Summer 2017
<b>Graduate Researcher</b> – Broad Institute of MIT and Harvard	Summer 2016
<b>Undergraduate Researcher</b> – University of Iowa, Dept. of Neurology	Summers 2014, 2015