

# JOHNATHAN JIA

Data scientist interested in development and implementation of new deep learning algorithms

## CONTACT INFO

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🌐 [github.com/jjia1](https://github.com/jjia1)

## PROFESSIONAL EXPERIENCE

2023

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**Data Analyst**

Baylor College of Medicine

Houston, TX

- Developed pipeline in Python and R for mapping, QC, and downstream analysis of scRNA-seq data collected by collaborators from brain organoids treated with radiation
- Provided exploratory analysis of scRNA-seq data gathered from presbyomic nasal tissue for collaborators
- Constructed pipeline in Python for QC, denoising, and analyzing image mass cytometry data of TNBC cells provided by collaborators

2022  
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2020

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**Graduate Research Assistant**

UTHSC Houston Graduate School of Biomedical Sciences

Houston, TX

- Developed an ensemble convolutional neural network with self-attention architecture using the TensorFlow and Keras libraries for identifying high confidence transcription factor targets for HTLV-1. Available on Github.
- Performed pseudotime analysis to infer which transcription factor programs drive the trajectory of COVID-19 infection severity using the R packages Seurat and Slingshot in conjunction with DrivAER, a machine learning model developed in Python.

2020  
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2019

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**Research Assistant I**

MD Anderson Cancer Center

Houston, TX

- Collected and prepared patient tissue samples for storage and downstream analysis. Wrote scRNA-seq pipelines for lab members to use.

## EDUCATION

2022  
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2020

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**M.S. in Quantitative Sciences**

UTHSC Houston Graduate School of Biomedical Sciences

Houston, TX

- Thesis: DeepHTLV: a deep learning model for detecting and elucidating human T-cell leukemia virus type 1 integration sites

2018  
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2015

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**M.D.**

UTHSC Houston McGovern School of Medicine

Houston, TX

2015  
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2011

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**B.S. in Biology, B.A. in Chemistry**

Emory University

Atlanta, GA

- Thesis: Investigating heterogeneity in the dynamics of virus and immune response

## AWARDS

2022

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**Best Quantitative Sciences Program Seminar Presentation**

UTHSC Houston Graduate School of Biomedical Sciences

Houston, TX

2022

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**First Prize Poster Presentation**

UTHSC Houston Graduate School of Biomedical Sciences

Houston, TX

2016

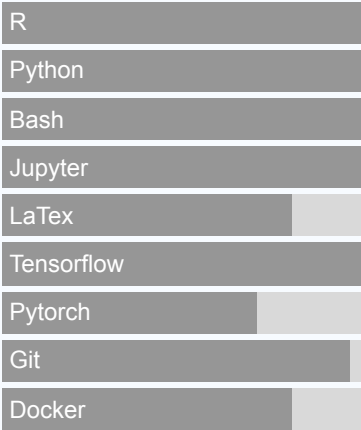
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**Rheumatology Research Foundation Research Award**

UTHSC Houston McGovern School of Medicine

Houston, TX

## SKILLS



## PUBLICATIONS

**Deep learning for detecting and elucidating human T-cell leukemia virus type 1 integration sites (Cell Patterns 2023)**  
H.Xu and J.Jia, H.Jeong,Z.Z

**Delineating COVID-19 immunological features using single-cell RNA sequencing (The Innovation 2022)**  
W.Liu, J.Jia, Y.Dai, W.Chen, G.Pei,Q.Yan, Z.Zhao

**Investigating Cellular Trajectories in the Severity of COVID-19 and Their Transcriptional Programs Using Machine Learning Approaches (Genes 2021)**  
H.Jeong and J.Jia, Y.Dai, L.Simon, Z.Zhao

**What Controls the Acute Viral Infection Following Yellow Fever Vaccination? (Bulletin of Mathematical Biology 2016)**  
J.Moore, H.Ahmed, J.Jia, R.Akondy, R.Ahmed, R.Antia