

JOHNATHAN JIA

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

PROFESSIONAL EXPERIENCE

- 2023

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Data Analyst Associate

Baylor College of Medicine

Houston, TX

- Developed automated pipeline for processing of NGS data with Docker, Python, and R
 - Applied scRNA/snRNA-seq pipelines for mechanistic analysis of transcriptomic data
 - Collaborated with software engineers and clinical geneticists to leverage LLMs for precision diagnosis of rare Mendelian genetic disorders
 - Supervised bioinformatics team to work with collaborators in using algorithms and data to drive hypothesis-driven research conclusions
 - Worked with Dr. Jeong and graduate students to develop mentor-mentee matching tool using LLMs with RAG and RLHF
- 2022
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2020

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Graduate Research Assistant

UTHSC Houston Graduate School of Biomedical Sciences

Houston, TX

- Developed a convolutional neural network with self-attention architecture using TensorFlow/Keras libraries to identifying high confidence transcription factor targets for HTLV-1. Available on Github.
 - Performed pseudotime analysis on scRNAseq data to infer which transcription factor programs drive COVID-19 infection severity with Seurat and DrIVAER
- 2020
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2019

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Research Assistant I

MD Anderson Cancer Center

Houston, TX

- Processed, prepared, and stained patient samples for Nanostring and Cytometry

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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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

CONTACT INFO

✉ jdjia93@gmail.com
🌐 [jjia1](#)
📄 [Me](#)

LANGUAGES

R
Python
Shell/Bash
Git
Docker
Node.js

PACKAGES

Tensorflow
PyTorch
Cuda
LangChain
PEFT
LoRA
Transformers

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

CERTIFICATES

Enhancing Data Science Outcomes With Efficient Workflow
NVIDIA
2024
Last updated on 2024-06-11.