Kevin Jin

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EDUCATION

The University of Texas at Dallas — Richardson, TX
Post-Baccalaureate Coursework. GPA: 3.77/4.0. — *Aug. 2020 – May 2022*

Johns Hopkins University — Baltimore, MD
B.S. Molecular and Cellular Biology. GPA: 3.5/4.0. — *Aug. 2016 – May 2020*
- Graduated with General Honors
- Dean's List: Fall 2018, Fall 2019, Spring 2020 (not awarded due to COVID-19)

SKILLS

Coursework: Data Visualization & Analysis, Computational Biology, Linear Algebra, Calculus, Discrete Mathematics
Languages: R, Python, C++, Java, MATLAB, LaTeX
Developer Tools: RStudio, VS Code, Jupyter Notebook, HPC, IntelliJ, Git, Linux

RESEARCH EXPERIENCE

Research Intern — Sep. 2022 – Present
Advisor: Dr. Guanghua Xiao | UT Southwestern Medical Center — *Dallas, TX*
- Perform text mining of electronic health records to improve clinical outcomes for cutaneous lupus erythematosus.
- Organize collaborations, collate results, and write manuscripts, resulting in three co-authorships and counting.

Research Assistant — June 2022 – Present
Advisor: Dr. Qiwei Li | The University of Texas at Dallas — *Richardson, TX*
- Develop `BACON`, an R package for a Bayesian shape clustering algorithm, resulting in a first-author publication.
- Evaluated BACON against k-means, hierarchical, and Gaussian mixture model clustering using the R package `SAFARI` and image datasets `MPEG-7` and `ETH-80`.
- Taught basic shape analysis and cluster analysis to three high school summer interns.

Undergraduate Research Assistant — Apr. 2019 – May 2020
Advisor: Dr. Soojung Claire Hur | Johns Hopkins University — *Baltimore, MD*
- Optimized a microfluidic device that harbors prostate cancer cells and exposes them to odorant gradients, provoking cell migration; results presented at JHU Undergraduate Research Symposium 2019.
- Contributed to MATLAB video analysis script that quantifies cell migration and taught Git to lab members.
- Composed a literature review of liposome and exosome-encapsulated drug delivery methods.

Summer Research Intern — July 2018 – Aug. 2018
Advisor: Dr. Debabrata Saha | UT Southwestern Medical Center — *Dallas, TX*
- Assessed the radiosensitization efficacy of four DNA-dependent protein kinase inhibitors in conjunction with hypoxic environments on cancer cells (A549, Panc0327) prior to irradiation.
- Composed a literature review of radiosensitization techniques and a report of my internship experience.

Undergraduate Research Assistant — Jan. 2018 – June 2019
Advisor: Dr. Steven S. An | Johns Hopkins Bloomberg School of Public Health — *Baltimore, MD*
- Elucidated inverse relationship between expression of olfactory receptor OR51E2 and metastatic potential of prostate cancer using degenerate primer PCR, metastatic mouse models, and RNA-Seq of patient tumor samples; results presented at JHU DREAMS 2018.
- Started odorant profile of prostate cancer cells (PC3, LNCaP) by quantifying changes in cell stiffness upon exogenous agonist exposure using optical magnetic twisting cytometry.

TEACHING EXPERIENCE

Undergraduate Teaching Assistant — Jan. 2018 – May 2020
Johns Hopkins University — *Baltimore, MD*
- General Physics I-II: Guided flipped classroom problem solving for 50 students; <1% of students were selected as TAs.
- General Biology I-II: Wrote official problem sets and study guides; led one-on-one office hours; proctored and graded exams; <1% of students were selected as TAs.

Leadership Experience

Patient Care Integration Associate
Apr. 2021 – Aug. 2021

North Texas Institute of Neurology
Plano, TX

- Transcribed 150+ patient encounters into electronic health records for a neurologist.

Volunteer
June 2019 – May 2020

Johns Hopkins Bayview Medical Center
Baltimore, MD

- Provided a compassionate presence for unresponsive, terminal patients without family or friends in the Intensive Care Unit.
- Delivered food and water to patients and connected disadvantaged patients with Medicare/Medicaid resources in 60-bed emergency department.

Vice President
Jan. 2017 – May 2020

Japanese American Student Association | Johns Hopkins University
Baltimore, MD

- Directed 10+ large events, often in collaboration with other Asian culture organizations, with hundreds of attendees to promote Japanese culture and representation.
- In charge of email listserv and booking rooms and security; expanded club from 10 to 50 active members.
- Applied for and received the $500 Student Life Programming Grant in 2020.

Secretary
Jan. 2017 – May 2020

Quiz Bowl Club | Johns Hopkins University
Baltimore, MD

- Directed and moderated 20+ high school and college tournaments, including National History Bowl and Bee 2018.
- Played in 20+ college tournaments; won ACF Fall 2017, a regular-level event.
- In charge of email listserv for 20 active members and regularly booking rooms and security for events involving more than 500 students, including minors; liaised with university administration on a regular basis.

Professional Organizations

Member: American Statistical Association

Publications

[1] **Kevin Jin**, Huimin Li, Stephen McKeown, and Qiwei Li. "Bayesian Clustering of n-gons via a Double Dirichlet Mixture Model". *Journal of the American Statistical Association* (2022). In preparation.

[2] Ruichen Rong, **Kevin Jin**, Kristin Denton, Stephen Lyon, Carol A Wise, Bruce Beutler, Qiwei Li, Jonathan J. Rios, and Guanghua Xiao. "Deep learning-based measurement of murine bone length in X-ray images". *Scientific Reports* (2022). In preparation.

[3] Ruichen Rong, Hudanyun Sheng, **Kevin Jin**, Fangjiang Wu, Danni Luo, Zhuoyu Wen, Chen Tang, Donghan M. Yang, Liwei Jia, Mohamed Amgad, Lee A.D. Cooper, Yang Xie, Xiaowei Zhan, Shidan Wang, and Guanghua Xiao. "A Deep Learning Approach for Histology-Based Nuclei Segmentation and Tumor Microenvironment Characterization". *Modern Pathology* (2022). bioRxiv.

[4] Xinyi Zhang, **Kevin Jin**, and Guanghua Xiao. "A deep learning-based onion peeling algorithm for measurement of oral epithelium layer number". *Cancers* (2022). In preparation.

Presentations

[1] **Kevin Jin**. "Adventures in Cluster Analysis: Approaching Shape Clustering". Talk given to the UTD Bioinformatics Joint Seminar. 2022.

[2] **Kevin Jin**. "Generating Microfluidic Gradients for the Study of an Olfactory Receptor involved in Prostate Cancer Metastasis". Talk given at JHU Undergraduate Research Symposium. 2019.

[3] **Kevin Jin**. "Could olfactory receptors modulate prostate cancer metastasis?" Poster presented at JHU Day of Undergraduate Research in Engineering, the Arts & Humanities, Medicine and the Sciences (DREAMS). 2018.