Jiannan YANG

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EDUCATION

School of Data Science, City University of Hong Kong   Hong Kong SAR, China
PhD Candidate Supervised by Prof. ZHANG Qingpeng   *Sep 2019 - Aug 2023*
GPA: 4.00/4.30

School of Geographic and Oceanographic Sciences, Nanjing University   Nanjing, Jiangsu, China
Bachelor of Science degree in Geographical Information Science   *Sep 2015 - Jun 2019*
GPA: 4.45/5.00   Ranking: 2nd out of 26 students

RESEARCH EXPERIENCE

Tencent AI Lab, Tencent   Shenzhen, China
Intern as Medical AI Algorithm Researcher   *July 2022 - Sep 2022*
Research Project: ER-BERT: a pre-trained model for *de novo* generation of
epitope-binding TCR

Tongji Medical College, Huazhong University of Science and Technology   *Wuhan, Hubei, China*
Visiting Scholar   *July 2021 - Aug 2021*

Division of Geology and Planetary Sciences, California Institute of   Pasadena, California, US
Technology
Visiting Student   *Sep 2018 - Oct 2018*

Department of Environmental Science, University of California, Riverside   Riverside, California, US
Visiting Student   *July 2018 - Aug 2018*

RESEARCH INTERESTS

Interpretable Deep Learning, Drug Discovery, Medical Informatics

PUBLICATIONS

1. **Yang, J.**, Li, Z., W.K.K., Yu, S., Xu, Z., Chu, Q., Zhang, Q. [Deep Learning Identifies Explainable Reasoning Paths of Mechanism of Drug Action for Drug Repurposing from Multilayer Biological Network.](#) *Briefings in Bioinformatics.* 2022. (First author, 2021 IF=13.994, ranked 1 of 57 under the category "Mathematical & Computational Biology")

2. **Yang, J.**, Xu, Z., Wu, W.K.K., Chu, Q., Zhang, Q. [GraphSynergy: Network Inspired Deep Learning Model for Anti–Cancer Drug Combination Prediction.](#) *Journal of the American Medical Informatics Association.* 2021. (First author, 2021 IF=7.942, ranked 4 of 31 under the category "Medical Informatics")

3. Chen, M., **Yang, J.**, Lu, J., Zhou, Z., Huang, K., Zhang, S., Yuan G., Zhang, Q., Li, Z., [Ureteral calculi lithotripsy for single ureteral calculi: can DNN-assisted model help preoperatively predict risk factors for](#)

sepsis? *European Radiology*. 2022. (Co-author, 2021 IF=7.034, ranked 20/136 under the category "Radiology, Nuclear Medicine & Medical Imaging")

4. Garett R. R.*, **Yang, J.***, Zhang, Q., Young, S. D. An online advertising intervention to increase adherence to Stay-at-Home-Orders during the COVID-19 pandemic: An efficacy trial monitoring individual-level mobility data. *International Journal of Applied Earth Observation and Geoinformation*. 2022. (Joint co-first author, 2021 IF=7.672, ranked 5/34 under the category "Remote Sensing")

5. **Yang, J.**, Tang, K., Cao, Z., Pfeiffer, D. U., Zhao, K., Zhang, Q. & Zeng, D. D., Demand-driven spreading patterns of African swine fever in China. *Chaos*. 2021. (First author, 2021 IF=3.741, ranked 17/267 under the category "Mathematics, Applied")

6. **Yang, J.**, Zhang, Q., Cao, Z., Gao, J., Pfeiffer, D., Zhong, L., Zeng, D. D., The impact of non-pharmaceutical interventions on the prevention and control of COVID-19 in New York City. *Chaos*. 2021. (First author, 2021 IF=3.741, ranked 17/267 under the category "Mathematics, Applied")

7. Xu, Z., Chan, C. S., Zhang, Q., Xu, Y., He, L., Cheung, F., **Yang, J.**, Chan, E., Fung, J., Tsang, C., Liu, J., Yip, P. S. Network-based prediction of the disclosure of ideation about self-harm and suicide in online counseling sessions. *Communications Medicine*. 2022. (Co-author, IF and rank not applicable now)

8. Xu, Z., **Yang, J.**, Zhang, Q. & Yip, P. S. F, Risk of suicide after a self-poisoning episode: a self-controlled case series study. *Social Psychiatry and Psychiatric Epidemiology*. 2021. (Co-author, 2021 IF=4.519, ranked 50/143 under the category "Psychiatry")

9. Xu, Z., **Yang, J.**, Lau, K. K., Yip, P. S. F., Wong, I. C. K. & Zhang, Q., Understanding the Association Between Antidepressants and the Risk of Being Diagnosed with Dementia in Older People: A Self-Controlled Case Series Study. *Journal of Alzheimer's Disease*. 2020. (Co-author, 2021 IF=4.160, ranked 122/275 under the category "Neurosciences")

WORK UNDER REVIEW

1. **Yang, J.**, He B., Yao J., Zhang, Q. ER-BERT: a pre-trained model for de novo generation of epitope-binding TCR. *Submitted to Nature Biotechnology*. 2023. (First author)

2. Liang, P.*, **Yang, J.***, Wang, W.L., Han, M., Li, Z., Zhang, Q. A Clinically-Intelligible Deep Learning Approach to Diagnostic Screening of Chronic Kidney Disease. *Under review at IEEE Journal of Biomedical and Health Informatics*. 2022. (Joint co-first author, under the first revision)

3. Kwok, W.*, **Yang, J.***, Ni, K.*, Chen Y., Huang J., Wang, X., Wang, W., Xu, Z., Zhang, Q. DrugCompass: a Web-based system for Western and traditional Chinese medicine exploration. *Under review at Journal of the American Medical Informatics Association*. 2023. (Co-first author, under the first revision)

PATENTS

1. Zhang, Q., **Yang, J.**, Xu, Z. Method and System for Predicting a Synergistic Effect. *US Patent*. 2021.

MEDIA COVERAGE

1. Using AI for accurately predicting synergistic cancer drug combinations, CityU Research Stories, 02/12/2021 (English/Chinese); also featured in EurekAlert!, ScienMag, Bioengineer, MedicalXPress, eCancer, and others.

2. Why NYC School Closures Might No Longer Be Needed, Gothamist, 16/03/2021.

3. Data science model emphasises the need for social distancing to combat Covid-19, CityU News, 21/02/2021; also featured in 有線寬頻, 商業電台, 信報, 香港經濟日報, 大公報, 星島日報, 香港 01, 東方日報, 香港商報, 晴報, 頭條日報, 東網, 巴士的報, The Standard, PCHome, Yahoo! News, and others.

4. Distancing more effective than school closures in reducing COVID-19 deaths, Global News, 10/02/2021.

5. School closures may not reduce coronavirus deaths as much as expected, American Institute of Physics, 09/02/2021; also featured in EurekAlert!, Science Daily, PhysOrg, Daily Mail, Agencia SINC, Courthouse News, Congation Live, EXPLICA .CO, Tv6 News, and others, 09/02/2021.

HONORS & AWARDS

Institutional Research Tuition Scholarship	City University of Hong Kong	*Sep 2022*
Outstanding Academic Performance Award for Research Degree Students	City University of Hong Kong	*Sep 2022*
Tencent Wiz Elite Talent Program	Tencent AI Lab	*Apr 2022*
Institutional Research Tuition Scholarship	City University of Hong Kong	*Sep 2021*
Outstanding Academic Performance Award for Research Degree Students	City University of Hong Kong	*Sep 2021*
Outstanding graduates	Nanjing University	*Jun 2019*
China National Scholarship	Ministry of Education of the People's Republic of China	*Nov 2017*
Gezongliang Scholarship	Nanjing University	*May 2017*
People's Scholarship	Nanjing University	*Nov 2016*

VENTURE PROJECTS

CEO and Founder of COMPASS Health Technology Limited, which aims to build an AI-based platform for precision medicine and facilitate the discovery of new anti-cancer drug combinational therapy.

HK Tech 300 Seed Fund	100,000 HKD	*Nov 2021*
HKSTP Ideation Program	100,000 HKD	*Dec 2021*
HKSTP Incubation Program (conditional approval)	1,200,000 HKD	*Nov 2022*

TEACHING EXPERIENCE

SDSC6001 - Statistical Machine Learning II	*Jan 2021 – May 2021*
SDSC3013 - Introduction to Social Media Analytics	*Sep 2021 – Dec 2021*
SDSC2004 - Data Visualization	*Jan 2022 – May 2022*