ZEKAI JIN

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Education

Peking University School of Life Sciences, Beijing, China

B.S in Biological Science | GPA: 3.48

Columbia University Mailman School of Public Health, New York, US

M.S. in Biostatistics (in progress)

Research Experience

Undergraduate Research Assistant in Chinese Institute for Brain Research | Beijing, China   2020.11 - 2021.2

- Developed a program with GUI based on OpenCV (C++) to trace the free movement of drosophila during Courtship.
- Utilized algorithms such as Watershed Algorithm and Kalman Filtering. The result exhibited no significance, and the project was abandoned.

Undergraduate Research Assistant in Center for Bioinformatics, Peking University | Beijing, China   2021.3 – 2022.7

- Finished Undergraduate thesis
- Presented in the discussion on cutting-edge computation neuroscience researches in the weekly Laboratory Meeting.
- Studied the influence of negative feed-back mechanism over artificially simulated biology-constrained recurrent neuro networks.
- Assisted in the debugging of a recorder program under high-resolution and high-framerate circumstances.

Work Experience

Internship in Xi'an 21st Century Biological Science and Technology Co., Ltd | Xi'an, China   2021.7 – 2021.9

- Identified key SNP sites separating different populations in Tibet, reduced the dimensions using UMAP and compared the data with Chinese Han population.
- Studied the relationship between Glioma and GWAS data collected in China, identified key SNP relevant to the disease. Compared the result with internationally published database. Also participated in the analysis of other diseases including Stroke and Diabetes.
- Participated in the administration and maintenance of their cluster computer system.

Research Skills

- Statistical analysis and visualization using both R and Python, especially at genotypic datasets.
- Simulation of Recurrent Neural Network and utilization of some deep-learning algorithms.
- General object-oriented programming using Python and C++, including GUI packages such as Tkinter and Qt.
- Multiple experimental skills in biology, chemistry and physics.

Awards

- Award for Contribution in Student Organizations, 2020, Peking University.
- New Student Scholarship, 2018, Peking University.
- Gold Award for China High School Biology Olympiad, 2016.

Further Information

- 2018-2022, Peking University Piano Association, Director of Acting Department. Organized, guided and performed in multiple student organized concerts.
- 2018-2019, Peking University National Model United Nations Conference, Director of EC and WHO committee. Participated in organizing and directing two national conferences for high school students.