

SHENG XU

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EDUCATION

The Chinese University of Hong Kong (CUHK)

Hong Kong, China

Master of Science in Computer Science

2021 – Present

GPA: 3.675/4.0 (without ranking)

East China Normal University (ECNU)

Shanghai, China

Bachelor of Engineering in Software Engineering

2017 – 2021

GPA: 3.38/4.0 (ranked 5/36)

IELTS: 7.0 (L: 9.0, R: 7.5, W: 6.0, S: 6.0)

HONORS AND SCHOLARSHIPS

Distinguished Academic Performance Scholarship, CUHK	2022
Entrance Scholarship, CUHK	2021
First-class Scholarship, ECNU	2020
Outstanding Student, ECNU	2019
Second-class Scholarship, ECNU	2019
Third Prize of <i>Youzu Cup</i> Shanghai College Programming Contest	2018

RESEARCH INTERESTS

Machine learning, Bioinformatics, Deep learning

RESEARCH EXPERIENCE

Artificial Intelligence in Healthcare (AIH) group, CUHK

Advisor: Prof. Yu Li

CRISPR-Cas System Off target Activity Quantification

2022.02 – Present

- Proposed a contrastive learning model for CRISPR off-target prediction.
- Introduced novel features such as secondary structure and context to improve the performance.

DNA Single-Strand Break Prediction

2021.09 – Present

- Constructed a DNA single-strand break (SSB) database from *de novo* sequencing results.
- Proposed a deep learning framework for SSB site prediction and achieved a SOTA model.
- Visualized contribution score of each nucleotide based on integrated gradient analysis.
- Analyzed SSBs among 214 species and found that breaks are related to evolution.

Shanghai Key Laboratory of Trustworthy Computing, ECNU

Advisor: Prof. Qin Li

Trustworthy Artificial Intelligence

2020.09 – 2021.05

- Focused on applying formal methods to the verification of deep neural networks.
- Implemented a neural network robustness verification tool based on abstract interpretation.

SELECTED COURSEWORK

- CMSC5707 Advanced Topics in Artificial Intelligence
- ENGG5103 Techniques for Data Mining
- CMSC5711 Image Processing and Computer Vision