Yonghao Jin

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Education

UNIVERSITY OF SCIENCE AND TECHNOLOGY OF CHINA (USTC), HEFEI, CHINA

- Bachelor of Science in Biophysics, Department of Physics, expected
- Sept. 2013 - June 2017
- Overall GPA: 3.49/4.3 or 85.23/100

Open Source Projects

MMACLONE

GitHub Repository: https://github.com/jyh1/mmaclone

- A cross-platform term rewriting system (TRS) with syntax similar to *Wolfram Mathematica*
- Having received **over one hundred stars** on *GitHub*
- Featured with sophisticate pattern matching facilities, symbolic computation, lambda calculus, etc
- Winning me the ***Featured Contributor*** in the *Wolfram Community*

SEQUENCE

GitHub Repository: https://github.com/jyh1/sequence

- A user-friendly Windows GUI program developed with the GTK library aiming to help sequence validation in molecular cloning experiments
- Generating fasta files from related sequencing data to be used for alignment

Research Experience

STRUCTURE AND SEQUENCE MOTIF OF RBP BINDING SITES – 2016-PRESENT

Advisor: Prof. Kun Qu, School of Life Sciences, USTC

- Redesign and rewrite an *iCLIP-seq* (individual-nucleotide resolution Cross-Linking and ImmunoPrecipitation) data analysing pipeline with Python
- Fine-tune an iCLIP peak-calling algorithm, greatly reducing the evaluation time in P-Value estimation

- Analyse PARS (parallel analysis of RNA structure) data and reconstruct transcript secondary structures from PARS probing data with ViennaRNA Package
- Integrate PARS and iCLIP data to detect RBP sequence and structure binding motif to better predict RBP binding sites

VARIATION OF WATER MOLECULES VIBRATION WITH TEMPERATURE – 2015

Advisor: Dr. Wei Zhao, School of Physics, USTC

- Peak detection and analysis on Raman spectrum of water molecules
- Design algorithm to remove Rayleigh backgrounds of Raman spectrum
- Analyse the change of molecules vibration from the peak shift in Raman spectrum and interpret the observation with variation in hydrogen bond strength with temperature

Fields of Interest

Big data analytics; Data Mining; Bioinformatics; Biomedical informatics; Computational Biology;

Skills

- **Adept in:** Python, C/C++, Mathematica(Graphing, Programming), Haskell, Pascal, Scheme, Git, Atom
- **Familiar with**: Bash, Matlab, C#, Java, JavaScript, HTML

Standardised Tests

- **TOEFL iBT:** 29(Reading) + 29(Listening) + 22(Speaking) + 27(Writing) = 107
- **GRE General:** 170(QR) + 155(VR) + 3.5(AW)

Awards and Honours

- Bronze Merit Scholarship – 2014
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- First Prize, the 17th National Olympiad in Informatics in Provinces (NOIP) – 2011