Yuqing Zhao

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Education

Sichuan University *Sep 2016-Jun 2020*

- Bachelor of Software Engineering
- Bachelor of Life Science

Research project

Project-managing System Web Development *Jul 2019*

https://github.com/sichuan-university-se/SoftwareTraining/graphs/contributors

- Web application development based on Django and jQuery; Three user group oriented: administrators, teachers and students; With DNS, cloud server and database;
- Contribution: Front-end development, design and construction of UI and interface using jQuery and HTML

Titanic Survive Model Prediction *May 2019*

https://github.com/PepperJao/BP_NeuroNetwork-using-SGD

- Python: Numpy.
  1.MLP(Stochastic gradient descent/gradient descent)
  2.Naive Bayes
  3.KNN
- Contribution: all

Convolutional Neuro-Network for MNIST (UC Berkeley) *Apr 2019*

https://colab.research.google.com/drive/1VQJBcQhVGA1KOCUFkwEmtlx5GTSIVp8b

- MNIST data trained MLP and CNN
- Python3: Keras, Numpy
- Contribution: structure of activation functions, layers design.

San Francisco Crime Data Analysis *Apr 2019*

https://community.cloud.databricks.com/login.html#notebook/268233308700960/command/4342494497333943

- Analyze San Francisco crime problem according to time, area with SF open data, and optimize police force distribution.
- Python3: Dataframe, SQL, ggplot; JavaScript (for charts)
- Contribution: all

Web crawling (BoWu website). *Oct 2018*

- Images crawler
- Python : BeautifulSoup

Bioinformatics *Oct 2018*

- GWAS: SNP annotation on Aspergillus Niger infected Maize
- Linux: SnpEff, Plink

CRISPR-dCas9 Programming *Oct 2017–Oct 2018*

http://2018.igem.org/Team:SCU-China

- Inspired by the modularization, call-and-return and do-not-reinvent-the-wheel philosophy in computer programming design, we come up with the idea of using the dCas9 protein to manipulate the expression of proteins and implement complex logic in a single E. coli cell
- Contribution: Writing, result charts, webpage, experimental operations, part of art design

Rhythmic Production of Melatonin in E.coli *Oct 2016–Oct 2017*

http://2017.igem.org/Team:SCU_China

- Construction of the melatonin biosynthesis pathway in E.coli to produce melatonin, and simultaneously couple this process with optimized repressilator, a synthetic genetic oscillator with higher precision and stability, to magnify the function of repressilator and render melatonin production resemble mammalian periodicity in E.coli.
- Contribution: experimental design, operation, webpage design and writing, art design, publicity and human practice.

Competence skills

Programming:

- Python, Linux, R, Matlab, C, C++, JavaScript, SQL, Git

Data analysis:

- SPSS, Data Crawler

Course:

- Biology, Software Engineering, bioinformatics and statistics.

Tools:

- Latex, Markdown, Zotero, Git, Colab

English:

- TOFEL 98, CET-4 555, CET-6 519

Awards & honors

- Silver in iGEM (*International Genetically Engineered Machine*) competition *Sep 2018*
- Top 5 in college badminton tournaments *Apr 2017*

Internship & work experiences

- Research assistant at PolyU of Hong Kong *Feb 2020–Jul 2020*
- Internship at Chengdu research institute, CityU of Hong Kong *Nov 2019–Feb 2020*
- Tutor in the Modern Elite education *Dec 2016*