Shang-Hung Shih

Master student · Genomics and Machine Learning

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Education

National Taiwan University and Academia Sinica   **Taipei, Taiwan**
M.S. in Genome and Systems Biology Degree Program   *Sep. 2018 - Expected Jul. 2020*
- Working with Prof. Chien-Yu Chen who specializes in Genomic AI application.
- Related courses: Data Structures and Algorithms, Biomedical Data Mining, NGS, Bioinformatics and Genomic Medicine, etc.

Chung Shan Medical University   **Taichung, Taiwan**
B.S. in Biomedical Sciences   *Sep. 2014 - Jul. 2018*
- Joined a Bioinformatic research team of Prof. Yu-Fan Liu which focuses on NGS application and analysis.
- Related courses: Linear Algebra, Java Programming, Bioinformatics, etc.

Professional Experience

Constructing Transcription Factor Binding Profiles using Deep Learning, NTU   **Taipei, Taiwan**
Personal Project at c4Lab   *Dec. 2018 - Present*
- Using the chromatin immunoprecipitation sequencing(ChIP-seq) data from the ENCODE to predict the transcription factor binding site. So far, I have constructed profiles of K562 and HepG2 two cell lines.
- Utilized Techniques: Linux, Python, Machine Learning

RSG(Regulator, Site, Gene) Network Team, NTU   **Taipei, Taiwan**
RSG Network Team Administrator   *Oct. 2018 - Present*
- Manage a team of 4 people to maintain the network which integrate over 5 gene regulation databases, and provide lab members with features generator service for machine learning.
- Utilized Techniques: Linux, Git, Python

Taiwan Biobank WGS Variant Calling, Taiwania and NTU   **Taipei, Taiwan**
Team member, WGS2RDD Team at c4Lab   *Nov. 2018 - Present*
- Performed 498 WGS variant calling using Sentieon and additional analysis at Taiwania.
- Utilized Techniques: Linux

GVCFiltering tool, NTU   **Taipei, Taiwan**
Final Project of NGS, Bioinformatics and Genomic Medicine   *Nov. 2018 - Dec. 2018*
- Developed a tunnable and faster tool for filtering vcf with Population gvcf(genome vcf) Allele Frequency.
- Performed Germline analysis and family segregation of Parkinson's disease.
- Utilized Techniques: Linux, Java

Prediction of Survival Rate in Patients with Cancer, Taiwan AI Academy   **Taipei, Taiwan**
Team member, Technical Leader Class, AI Excutive Program   *May. 2018 - Sep. 2018*
- Used clinical data and molecular level data from TCGA to predict survival of patients with 28 types of cancer.
- Utilized Techniques: Linux, Git, Python, Machine Learning

Dockerized Somatic Mutation Analysis and Neo-antigen Prediction, CSMU   **Taichung, Taiwan**
Personal Project at Dr. Liu's Lab   *Jul. 2016 - Nov. 2017*
- Implemented dockerized somatic mutation analysis pipeline which is refer to GATK best practice.
- Performed somatic mutation analysis and neo-antigen prediction of 20 HCC and 200 OSCC patients.
- Utilized Techniques: Linux, Docker, multi-threading, Python, Perl

Extracurricular Experience

c4Lab, NTU   **Taipei, Taiwan**
Server Administrator   *Aug. 2018 - Present*
- maintain activity, software and security of lab server.

Dr. Liu's Lab, CSMU   **Taichung, Taiwan**
Server Administrator   *Jan. 2015 - Jul. 2018*
- maintain activity, software and security of lab server.

Skills

Java, Python, Perl, Git, Linux, Docker, Data Science