YVONNE H. CHAN

Contact

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https://github.com/YveHChan/

Skills

Programming

Python (Pandas, NumPy, Matplotlib, Scikit-learn, Flask)

PostgreSQL, R, Perl

Machine learning and modeling

Time series

Linear regression

Logistic regression

K-means clustering

K-nearest neighbor

Recommender systems

Decision tree

Random forest

PCA, SCA, Bootstrapping

Work experience

INSIGHT DATA SCIENCE – BOSTON, MA

Fellow, Insight Data Science, 2017

- Consulted for *Oh My Green*, a concierge healthy kitchen management service, to streamline the ordering process for their clients.
- Applied machine learning algorithms Prophet Time series to forecast future orders and Association analysis to recommend new products based on a client's purchase history using Python and PostgreSQL.
- Created a user-friendly web interface for account managers to populate sales orders developed using Flask and deployed on AWS.

UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL – Worcester, MA

Ph.D candidate, Biochemistry and Molecular Pharmacology, Fall 2017

- Processed and analyzed deep sequencing data of DNA containing >30M reads for correlations between organism fitness and gene sequence in Python and Perl.
- Applied statistical tools include PCA, SCA, Pearson's correlation, permutation tests, and Kolmogorov–Smirnov test in Python and R.
- Identified significant correlation between fitness landscapes of distant orthologues suggesting that fitness landscapes can be translocated in sequence space.

UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL – Worcester, MA

Interim manager, Small Molecule Screening Facility, 2013 – 2014

- Oversaw HTS core operations for the University including equipment management, consumables tracking, and small molecule library maintenance.

MAKOTO LIFE SCIENCES – Bedford, MA

Research associate, High throughput biology and assay development, 2008 – 2010

- Designed, optimized, and executed experiments to profile the mechanism of action for >5000 compounds through the use of In Cell Westerns and other cellular assays
- Instituted hierarchical clustering using TreeView software to rule out >90% of small molecules with common mechanisms, resulting in select development candidates with novel targets.

Education

UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL – Worcester, MA

Doctorate of Philosophy, Biochemistry & Molecular Pharmacology, Expected 2017

AMHERST COLLEGE – Amherst, MA

Bachelor of Arts, Biology, Fine Arts, 2004