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Henry Huang

https://github.com/hank-huang

EDUCATION

Skidmore College **Saratoga Springs, NY**
B. A. Computer Science, B. A. Mathematics *August 2016 - Present*

- **Cumulative GPA: 3.47 / 4.00; Major GPA: 3.70 / 4.00**
- Relevant Coursework: Data Structures and Algorithms, Databases, Discrete Mathematics, Probability, Analysis, Linear Algebra, Differential Equations, Multivariable Calculus, Mathematical Statistics

WORK EXPERIENCE

Skidmore College **Saratoga Springs, NY**
Undergraduate Research Fellow | Computation Biophysics *Summer 2018 – Present*

- Focused on modeling protein-protein interactions, funded by a NIH grant
- Created Hidden Markov Models to predict and characterize protein-binding sequences.
- Analyzed high-dimensional data using an ensemble of dimensional reduction and clustering techniques, including : principal component analysis, hierarchical clustering, *k*-means clustering
- Streamlined data-cleaning and data-collecting processes through Python and SHELL/BASH scripting
- Involved with the storage and interaction of data backed up on AWS (Amazon Web Services)
- Presented results to PhDs and graduate students at the 2019 Biophysical Conference
- Technologies used: Python, PyData (pandas, sk-learn, matplotlib), Bash, Linux, Git

Skidmore College Academic Services **Saratoga Springs, NY**
Computer Science and Statistics Tutor *February 2018 – Present*

- Tutored peers on Computer Science and Statistics courses
- Led peer study sessions as well as workshops on data science

The Hong Kong University of Science and Technology **Hong Kong SAR**
Junior Research Intern | Department of Electrical and Computer Engineering *Summer 2017*

- Communicated with supervisors and colleagues in a multi-lingual environment
- Designed and implemented an app in C++ for a team of eight graduate students to automate their data collection
- Used Model-View-Controller (MVC) architecture

PROJECTS

Predicting the S&P using Reddit | Machine Learning, NLP

- Built web scrapers in Python for data acquisition with SQLite integration
- Identified most significant news and modelled posts and comments using text clustering techniques
- Created an ensemble model utilizing boosting to predict S&P fluctuations based upon changes in Reddit news

Algorithmic Trading | Machine Learning, Time Series Analysis

- Analyzed intraday market pricing data using ML algorithms to develop a pairs-trading strategy in Python
- Built custom back testing engine using Java

ADDITIONAL EXPERIENCE AND AWARDS

Skidmore College Computer Science Club **Saratoga Springs, NY**
Founding Member and President *September 2018 – Present*

MCM: Mathematical Contest in Modeling by COMAP

- Co-wrote a paper modelling the energy use of four states from 1980 – 2007. Used the model to suggest energy usage improvement strategies. Presented results at the 2018 Hudson River Undergraduate Mathematics Conference

SKILLS

Programming Languages/Technologies: Python, Java, RDBMS (SQL, NoSQL), Git, Bash, Linux, C++, PyDdata (sklearn, Tensorflow, pandas, etc.)
Languages: Proficient in Mandarin Chinese