Xintong Zhu

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EDUCATION

New York University New York, NY, United States ***Sep 2017 – May 2021***
Bachelor of Arts / Computer Science and Honors Mathematics / Minor in Economics

- **Cumulative GPA:** 3.85 / 4.0
- **Relevant Course:** Data Structure, Algorithm, Numerical Computing, Natural Language Processing, Foundation of Machine Learning (Fall 2020, Graduate course)
- **Award:** Dean's Undergraduate Research Fund, Jurate Kazickas Research Scholar (with $1000 funding), Summer Undergraduate Research Experience of NYU Courant Institution (with $2000 funding)
- Currently in **Bachelor-Master Accelerated Program of NYU in Computer Science**

WORK EXPERIENCES

Vector Multidimensional (Beijing) Capital Limited Management Company ***Jun 2018 – Aug 2018***
Summer Internship | Software Engineering | Beijing, China

- Accomplished a quantitative finance program in python that analyzed stock market which contained 700+ companies stock information with 12,000+ data in real time each day
- Applied data mining skills to implement algorithms that selected stocks (and the corresponding companies) that by certain standards, such as total volumn, spread, and subscription ratio) effectively and precisely
- Created database of economic elements of USA including GDP, the exchange rate of RMB against U.S. dollars, and import and export trade for past 50 years

PROGRAMMING PROJECTS

Course Registration System Simulation (Java)
- Applied Object Oriented Programming and used real courses information to create a simulation of course registration system including login process, and basic utilities such as enroll, swipe, and waiting list

Interactive GUI Fruit-Catching Point-Counting Game (Java)
- Applied Java Processing to design an interactive Graphic User Interface games which allows users to use mouse to control a basket to catch different falling fruits for different scores and avoid sudden-appear-bombs

Simulation and Monitoring of Customers Queue (Java)
- Simulated customer queue of a virtual consulting company by real time
- Monitored properties including the queue length, each customer's waiting time, maximal number of customers to be served, and consultant's idle time using data structures such as linked list and queue

Searched Queries & Articles Matched Program Based on Ad Hoc Information Retrieval (Python)
- Analyzed 365 searched queries and used Ad Hoc Information Retrieval to select the most relevant academic articles within a collection of 1400 documents
- Ranked the relevance of each article to each query by computing TFIDF and cosine similarity

Automatic Thesaurus Generation & Converging Word Similarity Formula Deduction (Python)
- Proposed an enhanced algorithm model that generated thesaurus unsupervisedly by implementing iterations
- Derived a mathematical formula to compute word similarities which were used in iterations, and proved its monotone increasing and convergence
- Used Wall Street Journal data sets as training file (79325 lines), and evaluated and tested algorithm using WordNet

RESEARCHES PROJECTS

Analytical and Numerical Study on Hula-Hoop Dynamics and Levitation Condition ***May 2019 - current***

- Constructed a model of hula hoop motion based on Lagrangian Mechanics and implemented a simulation program in Matlab to solve the problem numerically
- Used high speed camera video-tracking techniques to record and capture hoop's motion information at each millisecond, and implemented algorithms that analyzed 16050 frames to track the exact motion condition of hoop and body and to calculate the sagging angle of hoop
- Implemented visualization program that recorded and reflected 25,000+ experiment video frame at real time
- Concluded general conditions of hula hoop levitation in equilibrium and stability analysis in three dimension using Coriolis Force and Lagrangian optimization

SKILLS

- **Programming:** Java, Python, C, MatLab, , HTML, CSS, JavaScript, Latex
- **Mathematics:** Stochastic Process, Probability, Algebra, Modeling & Simulation, Algebra, Analysis, PDE
- **Economics:** Analytical Statistics, Labor Marked Analysis, Welfare and Microeconomics Market Analysis
- **Language:** English (fluent), Chinese (native)
- **Others:** Microsoft Office, Photoshop, Experiment, Research experience, Modeling, Visualization, Simulation