Jiguang Li

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Education

- **Yale University** **New Haven, CT** *Aug 2019 - Dec 2020*
  - Future Master's student in Statistics
- **Middlebury College** **Middlebury, VT** *Sep 2015 - May 2019*
  - Bachelor of Arts in Mathematics, Bachelor of Arts in Computer Science
  - Summa cum laude (GPA: 3.83/4.00) ; Highest Honor in Mathematics
  - Thesis Work: *The Chevalley-Warning Theorem: Its Proofs, Generalisations, and Applications*
    Link: `https://drive.google.com/file/d/17pjkWAlPFEv1R1vsN1Ja55ny77ZTIhVl/view`

Honors

- 2017 Caltech Visiting Undergraduate Research Award (VURP)
- Middlebury College Scholars for every semester and recipient of Middlebury College Chen SU Scholarship
- Davis United World College Scholar and recipient of Shelby Davis Scholarship

Experience

- **3DKinect: 3D Reconstruction using RGB-D Images** **Middlebury College, Middlebury**
  Project Developer *Spring 2019*
  - We implemented an easy-to-use software that streamlines essential steps in 3D reconstruction pipeline.
  - Our final product can save, visualize, capture, and edit point cloud data using Microsoft Kinect Camera. The software can also stitch multiple point cloud data into one complete model (i.e. 3D registration) using the iterative closed point algorithm
- **UC Berkeley Summer Session** **University of California, Berkeley**
  Summer Exchange Student *Summer 2018*
  - Relevant Coursework: Machine learning and complex analysis. We covered theoretical foundations of machine learning and successfully implemented various complicated machine learning algorithms such as the EM algorithm, PCA, stochastic gradient descent, and kNN using Python.
- **Astronomy Research on Quasar Variability** **California Institute of Technology**
  Research Assistant *Summer 2017*
  - Used Excel and Python Pandas Library to organise and analyze huge astronomy data
  - Wrote Python programs to develop and compute multiple types of variability indices
  - Built various types of data visualisations using D3.js and Python Matplotlib Library
  - We found two statistical metrics could reject the null hypothesis at a level less than 1%.
  - More Information can be found here: `https://drive.google.com/file/d/1s9yV_41rw2_1R8lJbcArTS0LL0kR view?usp=sharing`

Course Projects

Independent Study on the Hausdorff Dimension of Brownian Path

- In this project, we concentrated on Hausdorff measure and Hausdorff dimension and how they can be applied to the study of Brownian motion. The Hausdorff dimension of the zeros, range, and graph of Hausdorff dimension of the Brownian motion were studied: `https://drive.google.com/file/d/18Kv9p3t8beBeNIFpGXNIuBRIS10MLuXn/view?usp=sharing`

D3.js project: Baby Name Voyage

- The project uses the data of baby names and builds an interface where users could learn the change of the population of a given baby name over the past 120 years via line charts. Users can select up to ten baby names and have the option to choose the gender of a baby name .

D3.js project: Messier Stars

- The project is about narrative visualisation: provided with scatter plots and dot histograms, users could learn the history of Messier star data set, the magnitude and distance distributions of Messier stars, and have the opportunity to explore Messier data set through scrolling.

Game Development: Gold Miner

- In this data structure class project, we implemented the classic game of Gold Miner using Java.

Core Technical Skills

Languages: Chinese (native), English (fluent), Spanish (intermediate), Italian (intermediate)
Certificates: Neural Networks and Deep Learning by deeplearning.ai on Coursera *June, 2018*
Programming Languages: C, Java, Python, D3.js, Javascript, HTML, CSS, Matlab, Octave
Softwares: LaTeX, Microsoft Word, Microsoft Excel, Microsoft PowerPoint, TOPCAT, Maple

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On Campus Jobs

- Linear Algebra and Multivariable Calculus Grader *Feb, 2016- May, 2017*
- Macroeconomics Theory Tutor : Offered drop-in and individual tutoring sessions *Feb, 2016- Dec, 2016*