

Jiguang Li

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• 272 Elm Street • New Haven, CT 06511

Education

- **Yale University** New Haven, CT Aug 2019 - Dec 2020
 - 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 Application
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Experience

- **Astrostatistics Research on Spectrum Normalization Algorithms** Yale University
Research Assistant Summer 2019
 - Implemented the Alpha-shape Fitting to Spectrum algorithm (AFS) and the Alpha-shape and Lab Source Fitting to Spectrum algorithm (ALSFS) in Python for continuum normalization. Developed Python code for lab source smoothing using the AFS algorithm.
 - **UC Berkeley Summer Session** University of California, Berkeley
Summer Exchange Student Summer 2018
 - Relevant Coursework: Machine Learning and Complex Analysis. Studied the theoretical foundations of machine learning and successfully implemented various machine learning algorithms such as the EM algorithm, PCA, stochastic gradient descent, and kNN using Python.
 - **Astrostatistics Research on Quasar Variability** California Institute of Technology
Research Assistant Summer 2017
 - Recipient of 2017 Caltech Visiting Undergraduate Research Award (VURP)
 - Used Python Pandas Library to organize and analyze huge astronomy data. Wrote Python programs to compute different types of variability indices for two populations of quasars. Built data visualization using Python Matplotlib Library and ran two-sample statistical tests.
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Projects

- **3DKinect: 3D Reconstruction using RGB-D Images**
 - Implemented an easy-to-use software that streamlines essential steps in 3D reconstruction pipeline. The final product can save, visualize, capture, and edit point cloud data using Microsoft Kinect Camera. The software can also perform 3D registration powered by the iterative closed point algorithm.
 - **Advanced Study on the Hausdorff Dimension of Brownian Path**
 - Studied the properties of fractal dimensions and various techniques to determine the Hausdorff dimensions of the zeros, range, and graph of the Brownian motion.
 - **D3.js project: Messier Stars**
 - Implemented a narrative visualization program in D3.js. Showcased the history of Messier star data set, the magnitude and distance distributions of Messier stars.
 - **Game Development: Gold Miner**
 - Implemented the classic game of Gold Miner in Java.
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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

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