## **Education**

University of Chicago (Chicago, IL) *Expected June 2020*

* B.A. in Statistics, Minor in Computer Science GPA: 3.24/4.0
* *Honors Include:* Dean’s List (2017, 2018)
* *Relevant Coursework:* Algorithms and Data Structures, Numerical Linear Algebra, Applied Regression Analysis, Statistical Theory and Methods, Computer Systems *(current)*, Machine Learning in Medicine *(current)*

## **Skills**

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| --- | --- |
| * *Backend:* Python (NumPy, Pandas), Java, C | * *Data:* R, Excel, CSV/JSON manipulation |
| * *Frontend:* JavaScript, jQuery, HTML, CSS | * *Concepts:* Data structures, algorithms, complexity analysis |

## **Work Experience**

**American University (**[**Xiao Lab**](https://sites.google.com/site/beixiao/)**),** Washington, DC

*Computer Science Research Intern August 2019 – present*

* Built an [algorithm](https://github.com/marty-jiffar/triplets) in Python to randomly sample video triplets from a space of over 95 million combinations for an experiment studying human perception of simulated cloth videos
* Devised a metric to calculate a ‘[hardness score](https://github.com/marty-jiffar/triplets#sampling-method)’ for each trial to produce a sample with a Gaussian distribution of difficulties
* Built a [website](http://xiaovisionlab.com/) in JavaScript and HTML/CSS and set up a virtual private server (VPS), allowing us to administer the experiment at a significantly faster speed and increase our data from 1500 video triplets to the desired 5000

**Digital Observers**, Naknek, AK

*Quality Control (QC) Technician* *June 2018 – July 2019*

* Enforced quality requirements regarding the chilling, bleeding, and floating of over 1 million pounds of salmon for a fleet of 200 fishermen in Bristol Bay, the world’s largest sockeye salmon fishery
* Collaborated with fellow QC technicians, tender captains, and fleet managers as a team responsible for an estimated $40 million in cannery quality bonuses to fishermen

**Georgetown University (Hamilton Lab)**, Washington, DC

*Population Genetics Research Intern* *June 2015 – September 2015*

* Performed polymerase chain reaction (PCR), gel electrophoresis, and DNA fragment analysis (using an ABI Prism 3100) to analyze and quantify genetic variation in over 400 striped bass (*Morone saxatilis*)
* Wrote a research paper, presented a [PowerPoint](https://docs.google.com/presentation/d/1ssCjqP_Sy1aWgm-mUMfmsnRK9xF-8tyMX5VpQtfxp1E/edit#slide=id.p), and participated in a poster session with peers to discuss my findings

## **Leadership Activities**

**College Council**, Chicago, IL

*Class of 2020 Representative* *September 2017 – June 2018*

* Won an election for class representative and voted on student government (SG) resolutions promoting student equity
* Voted to approve or disapprove funding decisions of the SG finance committee – the primary funding source for registered student organizations – which is responsible for disbursing nearly $300,000 each year

## **Projects**

**Retirement Calculator**

* Calculates in Python how a given retirement [portfolio](https://github.com/marty-jiffar/Retirement-Calculator) would have fared historically, using S&P 500 returns data, to help plan optimal savings based on the user’s annual spending and retirement length

**Bristol Bay Pay Day: a predictive model**

* Uses ex-vessel fish prices since 1984 and various economic variables to predict how much fishermen will be paid per pound of salmon – a figure that Alaskan canneries do not release until salmon season is nearly over