

# Alexander S. Chang

(301) 318-3042 | achang66@jhu.edu | 1 E University Pkwy, Baltimore, MD 21218

## EDUCATION

### Johns Hopkins University

*B.S. in Applied Mathematics and Statistics / M.S.E. in Data Science*

**Baltimore, Maryland**

*Expected May 2020 / 2021*

- **Concentrations:** Statistics and Statistical Learning (B.S.) / Computer Vision (M.S.E.)
- **Past and Upcoming Courses:** Applied Statistics and Data Analysis, Machine Learning, Data Mining, Computer Vision, Natural Language Processing, Identifying and Capturing Markets, Optimization I & II, Professional Writing and Communication

## TECHNICAL EXPERIENCES

### Electronic Arts (EA)

*Data Science Intern*

**Remote Internship**

*May 2020 – Present*

- Assisted in building the Text Analytics Platform (TAP) to automate the process of generating high-level insights from Twitter data
- Built unsupervised topic modeling reports for FIFA Mobile, helping the team gain a deeper understanding of player feedback
- Developed an algorithm to select the optimal number of topics/trends to display based on Natural Language Processing (NLP) concepts such as topic coherence and word embeddings

### Hopkins Extreme Materials Institute

*Machine Learning Research Assistant*

**Baltimore, Maryland**

*August 2019 – May 2020*

- Trained a Mask R-CNN model using TensorFlow and k-Fold Cross Validation to detect and classify melting zones associated with segmented images of a real time crystal growth; incorporated metrics such as average precision to evaluate model performance
- Improved the output accuracy of the classification model by 1.7% after using precision and recall scores to reduce training bias
- Wrote a splitter script to extract parameter values (i.e. rotation speed, temperature) in real time for image files in our dataset

### MongoDB

*Growth Analytics Intern*

**New York, New York**

*June 2019 – August 2019*

- Developed three quantitative segmentations of MongoDB's cloud customers through K-Means Clustering, increasing monthly recurring revenue by 9%
- Implemented A/B testing to determine the differences in webpage formats, improving conversion rate to the landing page by 1.4%
- Generated 10+ data visualization reports for the startup customer segment using Python and Tableau; key insights were used by the Growth Marketing team to effectively position MongoDB Atlas (the fully-managed cloud database) to both paid and free tier users

### Johns Hopkins Scheduling Group

*Operations Research Analyst*

**Baltimore, Maryland**

*February 2019 – December 2019*

- Optimized Minor League Baseball season schedules for various leagues, such as the Florida State League and the Texas League
- Built integer programs using MATLAB based on constraints in league rules and requests regarding teams' traveling distances, off-days, and opponent arrangements
- Improved the operations process through decreasing average distance traveled by 70 miles and eliminating 3 schedule conflicts

## LEADERSHIP & ACTIVITIES

### EcoMap Technologies, Inc.

*Business Development Lead*

**Baltimore, Maryland**

*June 2018 – August 2019*

- Developed a resource mapping software to help entrepreneurs identify applicable resources; received \$60,000+ in funding and finalized letters of intent with 6 local universities in Maryland
- Organized Baltimore's entrepreneurship resource data to construct a minimal viable product and pitch at conferences such as Innov8MD and the DC I-Corps program; awarded the Spark Grant

### Alpha Kappa Psi – Professional Business Fraternity

*Consulting Chair and Social Chair*

**Baltimore, Maryland**

*January 2018 – May 2019*

- Led the Consulting education project by teaching new members the basics of strategy consulting concepts and frameworks
- Guided a team of 5 students in crafting data-driven competitor analyses and marketing sizing recommendations for a local startup
- Managed over \$5,000 of budget to organize the chapter formals and other social events
- Focused on fostering a collaborative community by increasing average participation rate for social events by roughly 30%

## PROJECTS

### Job Applications Made Smarter

*June 2020 – Present*

- Built an end-to-end job recommendation system as a web application after web scraping 5000+ Glassdoor job postings
- Applied text preprocessing and machine learning to provide recommended jobs based on an uploaded resume as input

### NBA Predictive Analytics

*October 2019 – January 2020*

- Generated a model using Multiple Linear Regression and K-Means Clustering in Python to segment NBA players based on similar statistics as well as predict individual win shares

## SKILLS & INTERESTS

- **Technical:** Python, R, SQL, Tableau, MATLAB, Microsoft Excel, PowerPoint, and Word
- **Skills:** bilingual fluency in English and Mandarin Chinese, team-based professional communication, business strategy
- **Interests:** DJing, music production, basketball, hip hop dancing, cooking fusion foods, robotics