

# JACK VESSA

## DATA SCIENTIST

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## SUMMARY

Data Scientist and former Teach for America educator with a passion for using data to solve complex problems, educate others, and improve people's lives.

## SKILLS

### Coding Languages

Python  
SQL  
HTML  
CSS  
UNIX

### Machine Learning

Linear Regression  
Logistic Regression  
Gradient Boosting  
Random Forest  
Recommender Systems  
Neural Networks  
LDA Topic Analysis  
Natural Language Processing

### Tools/Technologies

A/B Testing  
Amazon Web Services  
APIs  
Data Mining  
Data Cleaning  
Data Visualization  
Docker  
Flask  
GitHub  
MongoDB  
NumPy / Pandas  
Scikit-Learn  
Spark  
Tableau

## EXPERIENCE

### Galvanize *Data Scientist in Residence*

San Francisco, CA  
2019 to Current

#### Projects:

Galvanize Groups: [www.GalvanizeGroups.com](http://www.GalvanizeGroups.com) | [GitHub Repo](#)

- Developed software tool to generate student groups for coding assignments and case studies
- **Tools/Tech:** Python, Scikit-Learn, KMeans Clustering, Flask, AWS Elastic Beanstalk

#### Responsibilities

- Instruct 24 Data Science students in Python, machine learning and statistical inference
- Plan and facilitate weekly Python and SQL interviewing sessions

### Data Science Fellow

#### Projects:

Charity Recommender: [www.CharityRecommender.com](http://www.CharityRecommender.com) | [GitHub Repo](#)

- Developed and deployed a web application to connect people with charitable organizations
- Leveraged Natural Language Processing to create item-to-item similar recommendations
- **Tools/Tech:** Python, Gensim LDA, Flask, AWS Elastic Beanstalk, Tableau Visualizations

#### Genius Groups

- Developed web application empowering teachers to group students using assessment data
- **Tools/Tech:** Python, Scikit-Learn, KMeans Clustering, Flask, AWS EC2

#### Case Studies:

- Built a fraud detection model for event company using logistic regression
- Built a movie recommender using matrix factorization & collaborative filtering ensemble
- Predicted user churn for ridesharing company using gradient boosting classification model
- Predicted heavy equipment auction prices using multiple linear regression

### Teach for America *Corps Member, Rising Leaders Fellow*

San Francisco Bay Area, CA  
2017 to 2020

- Selected from more than 45,000 applicants to join the national teacher corps of 6,000 recent college graduates
- Trained in TFA "boot-camp" to learn teaching strategies, educational pedagogy, and systemic obstacles to learning
- Led STEM track professional development for 30 corps members on building student confidence and accountability

### Making Waves Academy *AP Statistics and Algebra II Teacher*

Richmond, CA  
2017 to 2019

- Instructed, supported, and mentored 240 high school students
- Led professional development for 50 faculty and school leadership members on implementing digital gamification resources in classrooms
- Advised weekly school coding club meetings teaching HTML and CSS fundamentals
- Increased student state test (SBAC) scores by 16.3% and doubled AP Statistics passing rate

## ACTIVITIES

### Code Ignite *Instructor*

2016 to 2017

- Taught 20 students in CS fundamentals and facilitated development of Scratch games

### VandyHacks *Sponsorship Team*

2015 to 2017

- Secured more than \$63,500 from company sponsors for annual campus Hackathon

## EDUCATION

### Loyola Marymount University

2019

Master of Arts, Urban Education

Thesis Research: Digital Gamification in the STEM Classroom

### Vanderbilt University

2017

Bachelor of Science, Engineering Science

Minors: Computer Science, Human & Organizational Development