

## **Ivan Sepulveda**

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### **EDUCATION**

#### **University of San Francisco (USF), San Francisco, CA**

B.S. in Physics, Minors: Computer Science & Engineering-Physics

Expected August 2019

### **RELEVANT EXPERIENCE**

#### **Rideshare Modeling: Research Assistant – USF School of Management, San Francisco, CA**

*Professors Shivani Shukla & William Riggs*

April 2019 – Present

- Build a dynamic model of rideshare prices by day of the week based on Uber data
- Integrate real public transit data into model as a consumer option
- Co-author an academic paper that will draw on this model in order to make recommendations as to how metropolitan areas can decrease traffic congestion while maintaining consumer-driver economic equilibrium

#### **Computational Physics: Research Assistant – USF Physics Department, San Francisco, CA**

*Professor Milka Nikolic*

May 2017 – Present

- Wrote simulation of electrons propagating through Argon plasma in various conditions.
- Utilized results to obtain ideal plasma etching parameters.

*Professor Seth Foreman*

May 2016 – December 2016

- Wrote simulation of a femtosecond laser releasing photon pulses towards sharp metal alloy tip, altering parameters such as temperature, alloy composition and pulse length.

### **ACADEMIC & PERSONAL PROJECTS**

#### **Multithreaded Search Engine**

January 2019 – May 2019

- Wrote a Java program that cleans and parses the text from files and websites into an inverted index of word stems and their locations within the corresponding document
- Added support for exact search and partial searching

#### **When do stocks beat the S&P?**

April 2019

- Using various classification methods, determining essential stock performance metrics
- Evaluated securities in a binary manner to reflect if they had surpassed the S&P 500's performance for the equivalent time period

#### **German Credit Risk Model**

March 2019

- Built a credit risk scorecard (set of probability values) based on the sample data provided

#### **Retail-Fashion Stock Correlation Script**

September 2018

- Developed a methodology to compare percent changes in social media presence with percent changes in the corresponding retailer's stock price.
- Employed efficient use of Python API's and libraries to obtain social media and stock price figures dating as far back as necessary.

#### **Facial Recognition Algorithm**

October 2016 – December 2016

- Wrote and trained a facial recognition model with 70% accuracy using PCA and CV

### **SKILLS**

- R, Python, Java, HTML, CSS, & NLP
- Fluent in Spanish. Conversational in French.