

# SAMANTHA COMBS

## DATA SCIENTIST

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### RELEVANT EXPERIENCE

#### **Data Scientist - Silicon Valley Next Talent (SVNT) @SAP - June 2020 to present in Palo Alto, CA**

- Leveraging internal data from the CMI team to iteratively build a model from the ground up
- Regularly meeting with startups to demo the model or gain feedback on model success
- Drastically improving startup potential customer engagement on marketing campaigns
- Utilizing Azure Databricks to query data for model usage and Click CLI for command-line integration
- Participating in a variety of networking and career growth opportunities through the SVNT program

#### **Data Scientist Level I at CentralSquare Technologies - Greensboro, NC (May 2019 - December 2019)**

- Performed tasks in both data science and software engineering in the domain of public safety and justice and public administration software with a heavy focus on python programming
- Used scrum-based development tactics to build up a pipeline from the ground up for an incident forecasting software that relies on spatial, temporal, and numeric features
- Transferred the codebase and optimized tasks on cloud-based services such as Amazon Web Services (AWS) S3, Batch, and EC2
- Developed hyperparameter and feature importance plots that the team continues to use for visualizing performance and improving models
- Presented deliverables to management within the team as well as executives within the company
- Offered and accepted an extension to continue work at CentralSquare as a remote employee when returning for graduate studies

#### **Cohort Lead - Protein Edge Detection for Florida Atlantic University - Wilmington, NC (August 2018 - December 2019)**

- Implemented scikit-image algorithms to clean up noise in flattened hologram images of marine microorganisms and created a function to segment large images with many marine diatoms into individual diatoms
- Automated the training data creation process using Box SDK application program interface (API) calls
- Experimented with regression and deep-learning models such as convolutional neural networks to automate the counting and identification of the specific diatom *Ditylum*
  - Guided junior project members on model improvement tactics and next steps

#### **Project Lead - Pet Food Recall Research for Petrics, Inc. - Wilmington, NC (April 2019 - December 2019)**

- Automated the process of creating a clean and robust pet food recall database using Python scripts
- Analyzed the aggregated data and developed an in-depth report to be publicly released to pet food distributors and suppliers

#### **Smartfin Data Analysis for Scripps Institute of Oceanography - San Diego, CA (October 2018 - December 2018)**

- Utilized web scraping techniques to access surfboard fin data
- Provided data analysis and visualizations of the Smartfin readings and proposed techniques on how to work with the associated motion data

### ADDITIONAL EXPERIENCE

- **Graduate Assistant for University of North Carolina Wilmington Honors College - Wilmington, NC (August 2018 - May 2019)**
- **Web Development and Photography - Various Locations (May 2017 - May 2019)**  
The Skinny Gene Project, Small Business Payroll Services, Wild Rover Wildlife Services, Personal Blog
- **Resident Assistant at Wheeling Jesuit University - Wheeling, WV (August 2015 - May 2018)**
- **Student Government Association Vice President - Wheeling, WV (May 2017 - May 2018)**
- **Engineers for Exploration at the University of California San Diego - San Diego, CA (July 2017 - August 2017)**
- **Point Source Inc., Photonics Company - Germantown, OH (May 2014 - January 2017)**

## **EDUCATION**

### **M.S. Data Science University of North Carolina - Wilmington**

*4.0 GPA* – December 2019

### **B.S. Computer Science Wheeling Jesuit University**

Minors: Mathematics, Spanish

*3.9 GPA* – May 2018

## **HONORS AND CERTIFICATIONS**

Pragmatic Institute PMC Level I/Foundations, CJIS Level I Clearance, Computer Science Research Best Presentation (Building a Database for the Challenger Learning Center), Graduated with Highest Honors (summa cum laude), Honors Thesis Project (The Genetics of Identity), Dean's List WJU (four years), Honors College at WJU, DII Soccer Scholarship, Eleanor Miller Scholarship, Academic Scholarship WJU, Valedictorian at Valley View High School

## **SKILLS**

*Programming Languages:* Python, SQL, R, Bash, SAS, Java, HTML/CSS

*Packages:* Scikit-learn, NumPy, Matplotlib, Seaborn, Keras, Pandas, Scikit-image, Shapely

*Tools:* Agile/Scrum, Git, Command-Line Interface (CLI), Azure Databricks, Amazon Web Services (AWS), Geographic Information System (GIS)

*Operating Systems:* macOS, Linux, Microsoft Windows

*Concepts:* Statistics, Data Presentation, Data Wrangling, Data Visualization, Predictive Modeling, Data Analysis, Machine Learning Algorithms, Scripting