

## Palaksh Vardhan Rungta

### EDUCATION

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#### University of California - San Diego (UCSD)

SEPT 2018 - PRESENT

- *Bachelors of Science* in Cognitive Science with Machine Learning. Class of 2022, **GPA: 3.7 / 4.0**
- **Courses:** OOP, Data Structures, Machine Learning, DS, Probability, Linear Algebra, Discrete Math

### WORK EXPERIENCE

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#### Price.com, *Software Engineering Intern*

JUN 2021 - PRESENT

- Explored multiple **API** services to increase the data quality of product identifiers. This improved the **coverage** of crucial fields by **83%** which improved the product matching **model's accuracy by 9%**.
- **Lead** the design and implementation of a **Python microservice** to extract **80%** of the outdated product URLs from the blogsite's **MySQL** database and update them into the new format.
- Constructed the testing framework of the existing **data pipeline independently**. Tested over **250** retailers and worked with **Airflow DAGs** to execute and deploy them.
- Investigated and integrated third party **API** services into existing pipelines to add the coverage of **best selling products** found on Amazon to our **MongoDB** database to drive up sales.
- Implemented a **Python** script for the pipeline to obtain a retailer network's cashback offer data.
- **Technical Stack:** Python, MongoDB, MySQL, Airflow, Git.

#### COVID 19 Deep Learning Lab, *Machine Learning Intern*

APR 2021 - PRESENT

- Took the **ownership** to run weekly predictions of COVID-19 death rates using Professor Rose Yu's UCSD-NEU **deep learning** model and submit it to the **CDC**. [tinyurl.com/7cjdnpv6](https://tinyurl.com/7cjdnpv6)
- Utilized high computing **supercomputer clusters** to execute **Slurm** jobs to run **Python** scripts.
- Took the **lead** to additionally **predict hospitalization rates** along with death rates using the model.

#### FinBit.io, *Data Science Intern*

OCT 2020 - DEC 2020

- Implemented the **Rabin-Karp** algorithm in **Python** to recognize and group **duplicate users** with a **98% success rate** to avoid false entries and reduce the runtime drastically.
- Successfully automated the extraction of **location** data from **manual bank entries** for **47%** of the users for better field coverage using **Python**.
- Took the **lead** to use bank transaction data to predict the salary for **73%** of users successfully.

### TECHNICAL PROJECTS

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#### Safe N' Sound: A Computer Vision Solution

SD Hacks 19

- Our team created a **computer vision (OpenCV)** application aimed at reducing distractions while driving by first recognizing the face of the driver from their co-passengers and then alerting them if they are distracted based on their degree of eye movement with respect to the road. [git.io/JBahz](https://git.io/JBahz)

#### Bar Locations and DUI cases

2020

- Examined the correlation between Bar locations and DUI accidents in San Diego using ML techniques
- Performed **Geo-Spatial analysis**, **Bootstrapping**, and used various **APIs** and **Machine Learning** algorithms such as **SVM** and **K-Nearest Neighbors (KNN)** to explore the correlation. [git.io/JBahL](https://git.io/JBahL)
- **Technical Stack:** Python, Sci-kit learn, Pandas, Geopandas, Git.

#### Comparison of Supervised Learning Algorithms

2021

- A comparison study to measure the performance of **supervised learning** algorithms - **Random Forest**, **Logistic Regression**, and **Artificial Neural Networks** using **hyperparameter tuning** on sklearn.
- Statistical metrics used were **accuracy**, **F-score**, and **ROC AUC curve** over 4 datasets. [git.io/JBapn](https://git.io/JBapn)

### SKILLS

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Python, Java, C++, Flask, SQL, MongoDB, Airflow, Tensorflow, Sci-kit Learn, Keras, HTML, CSS, Linux, Git  
Machine Learning, Data Analysis, Backend Development, Deep Learning (CNN, RNN, GAN), Computer Vision.