

# Ananya Kumar

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## Skills and Technologies

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**Languages:** Python, Java, C, C++, Racket, HTML/CSS, SQL, Javascript

**Libraries:** PyTorch, TensorFlow, SciKit-Learn, Folium, Keras, NumPy, Pandas, Seaborn, Vaex

**Frameworks/Tools:** Git, Bootstrap, VS Code, PyCharm, MySQL, Eclipse

## Experience

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### Full Stack Developer

May 2021 – Aug 2021

*Plotly Inc.*

*Waterloo ON, Canada*

- Assisted in generating over **1M CAD** by working on client apps, proof of concepts and weekly office hours
- Switched data processing from **Pandas** to a blend of **Vaex** and **NumPy** leading to **99.94%** increase in efficiency
- Designed custom 3D components from **Plotly.py** graphs leading to successful contract worth **over 100,000 CAD**
- Debugged issues with **Redis**, **Celery**, Plotly libraries and Dash Enterprise components on call every week

### Data Analytics Intern

Jan 2021 – Apr 2021

*Defence and Security Foresight Group, University of Waterloo*

*Waterloo ON, Canada*

- Improved data visualization for research on Mis/Disinformation & Ethnocultural Communities by Dr.Momani
- Created appealing infographics and visuals with **Matplotlib** to share factual data consolidated using NumPy
- Developed graphics and images in **Adobe Photoshop** for counter messaging and sharing research

## Projects

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### ☞ Coffee Clusters | *Python, Folium, NumPy, Pandas, Scikit-Learn*

- Predicted best location to open coffee shops using K-Means Clustering from **Scikit-Learn**
- Organized geographical data scraped from Wikipedia with **BeautifulSoup** into 5 clusters based on frequency
- Used **Foursquare API** to acquire **243** shop locations and charted neighborhood clusters using **Folium**

### ☞ XYZ Rendering | *Python, Plotly, Meshio, Dash, Pandas, NumPy*

- Devised formula to convert .obj files with **over 50,000** coordinates to vectors in ply-csv format using **Meshio**
- Developed method to simultaneously highlight multiple regions of any 3D model using **Plotly** Mesh plots
- Manufactured Dash app with the ability visualize, highlight and customize any 3D model online

### ☞ Cuisine Connection | *NumPy, Pandas, Python, Scikit-Learn*

- Modeled decision trees with **35 nodes** in **Scikit-Learn** to categorize intercontinental recipes based on ingredients
- Final confusion matrix showed a **77%** success rate while predicting origin of recipes from Asian cuisines

### ☞ Visualize | *Python, Matplotlib, SQL, MySQL, Seaborn*

- Spearheaded development of sales analysis app with a **Pyfiglet** interface
- Visualized graphs using **Matplotlib** and **Seaborn** and uploaded data to a **MySQL** database

## Certifications

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- ☞ Data Science Professional Certificate by IBM
- ☞ AI Engineering Professional Certificate by IBM
- ☞ Mathematics for Machine Learning Specialization by Imperial College London

## Education

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### University of Waterloo

Sep 2021 – Present

*Candidate for Bachelors in Computer Science*

*Waterloo ON, Canada*

- Minor in Digital Arts Communication
- President's Award of Distinction worth **\$2000** - awarded for overall grade of 95% and above
- Euclid Contest 2021 - **Honor Roll**