

# Ananya Kumar

[github.com/ananya-k15](https://github.com/ananya-k15) | [a327kuma@uwaterloo.ca](mailto:a327kuma@uwaterloo.ca) | [in linkedin.com/in/ak5492](https://www.linkedin.com/in/ak5492) | [github.com/ananya-k15](https://github.com/ananya-k15)

## Education

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### University of Waterloo

Sep 2021 – May 2025

*Candidate for Bachelors in Computer Science*

*Waterloo ON, Canada*

- Minor in Digital Arts Communication : Designing Digital Images & Interaction, Game Design, Digital Storytelling
- Relevant coursework : Algorithms, Operating Systems, Statistics, Applied Cryptography, OOP, Linear Algebra II

## Skills and Technologies

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

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

**Frameworks/Tools:** Git, AWS, Google Cloud, Databricks, PowerBI, Bootstrap, MySQL

## Experience

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### Data Analyst

Sep 2023 – Dec 2023

*BDO Lixar*

*Toronto ON, Canada*

- Analyzed client corporate structure to pinpoint **5+** focus areas for Management Dashboard using **Databricks**
- Employed **PowerBI** to visualize emerging trends and integrate insights from market analysis of **8** competitors
- Mapped out project changes, providing implementation guidance and Python scripts for **20+** metric calculations
- Devised multiple alternative illustrations for **30+** PowerBI visualizations and insights for future considerations

### Software Developer

Jan 2023 – Apr 2023

*Definity Financial*

*Toronto ON, Canada*

- Developed a Python-based automation framework to compare datatables using either Pandas or **PySpark**
- Optimized data loading efficiency by **9%** when retrieving from **AWS S3** buckets and **Google Cloud** storage
- Engineered algorithm to match and compare rows without a primary key, broadening comparison scope
- Authored comprehensive documentation to facilitate seamless adoption of new framework by **200+** users

### Full Stack Developer

May 2022 – Aug 2022

*Plotly Inc.*

*Montreal QC, Canada*

- Devised algorithm to transform 3D mesh plot to address a major client's pain points, securing a **\$100K** contract
- Reduced computation time by **99.94%** by migrating data processing from Pandas to Vaex and NumPy
- Leveraged principles from calculus and linear algebra to manipulate and rotate the axes of a 3D plot
- Redesigned internal apps for smaller screens using media queries and flexible gridbox systems
- Collaborated on client office hours to debug issues with Redis, Celery, Plotly and Dash Enterprise

## Projects

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

- Predicted the best locations to open coffee shops using K-Means Clustering from **Scikit-Learn**
- Processed 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*

- In extension of a project field tested at Plotly, manufactured a Dash application to visualize any 3D model
- Enhanced a formula to convert **.obj** files with **50,000+** coordinates to vectors in ply-csv format using **Meshio**
- Developed a method to simultaneously highlight multiple regions of any 3D model using **Plotly** mesh plots

## Certifications and Awards

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☉ Data Science Professional Certificate by IBM

☉ Mathematics for Machine Learning Specialization by Imperial College London

☉ President's Award of Distinction worth **\$2000** - awarded for overall grade of 95% and above