# Anna Dupree

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### **WORK EXPERIENCE**

Freelance

Statistical Consultant Jan 2024 – Present

Developed financial models with Monte Carlo simulations to forecast stock prices

Researched market trends to create actionable reports that informed strategic client investments

Cita Technologies

June 2023 – Sept. 2023

Mobile App Development Intern

Buffalo Grove, IL

Remote

- Configured and tested updates for IoT smart sump pump mobile app, ensuring seamless hardware integration
- Redesigned UI/UX to improve aesthetic appeal and reduce feature discovery time by 30% through A/B testing
- Led data-driven optimizations (ideation to deployment) via cross-cultural teamwork & proactive problem solving
   Irvine Valley College
   Jan. 2022 June 2023

Irvine Valley College
Math Tutor

Irvine, CA

- Helped students to develop their own problem solving tools in mathematics, physics, and computer science
- Employed dynamic teaching strategies to engage and support students aged 16 to 60 in active learning

#### RESEARCH EXPERIENCE

### Machine Learning/Data Processing

UC Irvine

- Analyzed effect of genetic and environmental factors on E. Coli growth rate with simulated annealing algorithm
- Utilized principal component analysis methods for data processing and testing optimization hypotheses
- Explored data behavior with k-means clustering and t-SNE visualizations

# Data Analysis/Visualization

Irvine Valley College

- Created data visualizations with Python to investigate disappearance of 11 billion Alaskan snow crabs
- Acquired and cleaned data from multiple data sets for time-series maps showing ocean temperature, population density, population range, and predator-prey interactions between Pacific cod and snow crabs

#### **Population Modeling**

Irvine Valley College

- Designed study to assess recovery programs of the California condor and Yellowstone gray wolf populations
- Implemented novel application of logistical model and Lotka-Volterra (predator-prey) model
- Was lead researcher and guided team members through their roles

#### Numerical Analysis Simulation

Irvine Valley College

Used C++ to apply Euler's method of numerical analysis to create simulation of coupled spring-mass systems

#### **EDUCATION**

#### University of California - Los Angeles

December 2025

B.S Statistics & Applied Mathematics

Los Angeles, CA

Irvine Valley College

May 2023

A.S. Mathematics & Physics, Summa Cum Laude

Irvine, CA

#### **AWARDS**

- First Place STEM Poster UCI CC Honors Research Conference 2023
- First Place (tie) STEM Poster UCI CC Honors Research Conference 2022
- First Place Persuasive Speech PSCFA Cool-Off Tournament 2022
- First Place Irvine Valley College Intramural Communications Tournament, Spring 2022

## **SKILLS**

LaTeX, R, R Markdown, Python, MATLAB, C++, Solidworks, Quantitative Analysis, Machine Learning, Financial Analysis, Data Communication, Data Visualization, Experimental Design, Pole Dance, Drink Mixing