Krish Arora

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Education

University of California, Berkeley **May 2026**

B.A., Data Science; B.A., Applied Mathematics

Relevant Coursework: Algorithms for Machine Learning, Data Structures & Algorithms, Multivariable Calculus, Principles and Techniques of Data Science, Linear Algebra, Differential Equations, Discrete Math, Probability Theory, Macroeconomics

Awards: PwC Case Competition: 1st Place, Bio-Rad STEM Scholar, Irvine ML Competition 2nd Place, BSA Eagle Scout

Experience

Global Key Advisors **San Francisco, CA**

Quantitative Analyst Intern *Jun 2024 – Present*

- Engineering an NLP model through GESIM in analyzing trends in MD&A length analysis for 30,000 startup companies for stock price predictions; utilized sentiment analysis & readibility scales for concise information clarity (85% accuracy)
- Implemented an autonomous algorithm using Python and SQL to analyze company due-diligence scores and outcomes
- Compiled company success rate results into a comprehensive master database for enhanced data management/analysis

Qualcomm **San Diego, CA**

Data Analytics Consultant (Contract) *Jan 2024 – May 2024*

- Redesigned Qualcomm Academy website UI/UX for course/certification offerings towards global corporate users; curated high-fidelity Figma mockups now implemented on the site, resulting in a 60% increase in outsider consumer enrollment
- Established financial models for Qualcomm's offerings, factoring in value propositions, competitor pricing, and market demand in various regions; conducted sensitivity analysis to ensure competitiveness while maintaining profitability

Outer Rim Exploration (ORE) **Berkeley, CA**

Machine Learning Intern *Jan 2024 – May 2024*

- Scraped geospacial muon flux data fine-tune a CNN in detecting underground mineral deposits with minimal excavations
- Derived muon flux and muon intensity equations to accurately calculate subsurface regions as functions of depth/density
- Visualized 3-D subsurface models through Seaborn with generated flux data using Bayesian/MCMC inversion modeling

Mathnasium at Northwood **Irvine, CA**

Mathematics Instructor *Jan 2022 – Aug 2023*

- Developed academic curriculum for 300+ students from elementary math to AP Calculus and AP Statistics coursework
- Taught concepts constructively and in-depth, yielding 90% acceptance to accelerated middle/high school math programs

Project Experience

2-D Interactive World Generator

Java

- Designed and and implemented a 2D tile-based world exploration engine with avatar interactivity and feature scalability
- Developed a reply feature showing all previous actions and a tile renderer displaying tiles in the user's line-of-sight.

Tensor Decomposition for Deep Neural Network Compression

Python, TensorFlow, TensorLy, PyTorch, Pandas, NumPy

- First-authored research paper (published in RMP Journal), 12-min presentation, and technical poster to Ph.D. scholars
- Scrutinized over 25 research papers on tensor-train decomposition methods, higher-order tensor manipulation, and bias extraction techniques, focusing on optimizing deep neural network layers through low rank tensor approximations
- Developed an autonomous algorithm for predicting optimal tensor shape, dictating compression percentages for network layers, and decomposing parameters within neural network layers; increased initial network from 33% to 88.7% accuracy

Using Flourescence Nanosensors to Detect Vitamin B12 Deficiency

Research Project; Python, Figma

- Led research alongside UC Berkeley students to develop a theoretical, novel device to diagnose Vitamin B12 deficiency in pediatric patients using FRET-fluorescence nanosensors which are used to detect distinctive corrin ring cobalt structures
- Produced research poster, presentation, 10-min speech, and 2-min industry pitch within a fast-paced, 7-week timeframe
- Presented technical analysis on vitamin structure & device composition alongside a business strategy for implementation in the current biotech industry to company stakeholders and postdoctoral scholars at UC Berkeley BMES Symposium

Technical Skills

Technical Languages: Python, Java, SQL, HTML, CSS, JavaScript, LaTeX

Tools: Seaborn, TensorFlow, PyTorch, Keras, PyMC, Tableau, Pandas, Sklearn, Jupyter Notebook, Git, M-Suite, NLTK

Personal Interests: Computer Building, Robotics, Music, Photography, Fashion, Traveling, Spicy Foods