

Divit Rawal

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EDUCATION

University of California, Berkeley

Aug. 2023 – Present

B.A. Physics, Mathematics, Minor in Electrical Engineering & Computer Science

Berkeley, CA

- National Merit Scholarship Finalist 2023 (awarded to <1% of students)
- Multivariable Calculus, Structure and Interpretation of Computer Programs, Designing Information Devices and Systems I, Hands-On PCB Engineering, Statistical Mechanics of Neural Networks (Directed Reading Program)

IBM Professional Certification in Machine Learning

Jan. 2023 - Jun. 2023

Coursera Certified Completion

Coursera

- Studied the fundamentals of machine learning including regression, clustering, classification, deep learning, and reinforcement learning
- Completed capstone project using machine learning to build recommender systems

EXPERIENCE

Tutor

May 2023 – Present

Kairos Academics

Irvine, CA

- Provide one-on-one tutoring to high school students in math and science
- Develop personalized lesson plans and study strategies to address individual student needs and learning styles
- Track student progress and adapt teaching methods to ensure comprehension and academic growth

Researcher

Feb. 2022 – July 2023

Department of Physics & Astronomy, University of California, Irvine

Irvine, CA

- Developed, trained, and tested TensorFlow/Keras deep learning models to address data scarcity issues in high momentum collision analysis with >90% accuracy
- Simulated particle collisions using MadGraph, Pythia8, Delphes, and ROOT and wrote reconstruction algorithms in C++ and Python to predict particle mass with <2% error

Head of Tutoring

Aug. 2021 – Jun. 2023

SimpleMath Foundation

Irvine, CA

- Led a team of 11 tutors to provide academic support to children from underserved communities, helping improve their understanding and confidence in math
- Personally tutored 2 students each week, tailoring instruction to meet individual needs and learning styles
- Created and published a series of engaging and informative YouTube videos on key math concepts

PROJECTS

Amazon OpenSearch | *Java, Git, Docker, TorchScript, Machine Learning*

Sep. 2023 – Present

- Member of the OpenSearch Contributor Initiative 2023
- Contribute to ml-commons GitHub repository by developing machine learning algorithms and plugins in Java
- Collaborate with undergraduate students, graduate students, and industry professionals across the globe under the mentorship of machine learning engineers at Amazon

Research-Engine | *Python, Flask, Svelte, Web Scraping, Natural Language Processing*

Nov. 2022 – Apr. 2023

- Led a team of 3 to develop Research-Engine, a tool to help users efficiently find and access relevant information and research about a topic
- Developed a full-stack web application hosted on an AWS EC2 instance using Flask and Svelte
- Implemented web scraping and natural language processing to obtain and summarize information from Google

Watersort Solver | *Flutter SDK, Dart, Java*

Jul. 2022 – Nov. 2022

- Designed and developed Watersort Solver in Java and Flutter to quickly and accurately solve any watersort brainteaser
- Published to Google Play Store

TECHNICAL SKILLS

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

Frameworks: ROOT, Flutter, Flask, Tensorflow/Keras, PyTorch

Libraries: Pandas, NumPy, Matplotlib, SciKit-Learn, BeautifulSoup