**Divit Rawal**

Irvine, CA 92620 [divitrawal.com](http://divitrawal.com/) [divit.rawal@gmail.com](mailto:divit.rawal@gmail.com)

*Passionate physics student with experience in software development, machine learning, and computational methods. Eager to apply my skills and experience to solve complex problems and make a positive impact in the world of physics and beyond.*

**EDUCATION**

**UNIVERSITY OF CALIFORNIA, BERKELEY** *Class of 2027*

Intended Major: Physics

**NORTHWOOD HIGH SCHOOL** *Class of 2023*

* National Merit Scholarship Finalist 2023 (1 of ~15,000 in the US)
* Organized multiple speaker events and activities as events coordinator for Astronomy Club
* College Coursework
  + Single-Variable Calculus I & II (Chapman University)
  + Intro to Computer Systems, Intro to Business, Intro to Life Sciences, Spanish II (Irvine Valley College)

**MACHINE LEARNING PROFESSIONAL CERTIFICATION, COURSERA (IBM)** *Jun 2023*

* 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
* **Skills**: data pre-processing and cleaning, feature selection, statistical analysis, data visualization

**WORK EXPERIENCE**

**RESEARCH INTERN, UCI - DEPARTMENT OF PHYSICS & ASTRONOMY** *Feb 2022 - Present*

* In the lab of Dr. Daniel Whiteson, investigated the use of computational methods in high-energy physics
* Trained and tested neural networks for signal-background classification in high-momentum collisions
* Developed algorithms to investigate simulated decays of heavy particles and their properties, including theorized particles
* **Skills**: Python, TensorFlow, C++, ROOT

**HEAD OF TUTORING, SIMPLEMATH FOUNDATION** *Aug 2021 - Present*

* 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
* **Skills**: leadership, management, tutoring and instruction techniques

**PROJECTS**

**WATERSORT SOLVER APP**

* Designed and developed the “Watersort Solver” app using Java and Flutter, which quickly and accurately solves challenging watersort brainteasers
* Code available on GitHub: @divitr/watersort\_solver\_app
* **Skills**: Java, Flutter, Dart, Android Development

**RESEARCH ENGINE WEBSITE**

* Led a team of 3 to develop research-engine.net (using Python and Svelte) to help users efficiently find and access relevant information and research about a topic
* Code available on GitHub: @divitr/research-engine
* **Skills**: Python, Natural Language Processing, web scraping, Amazon Web Services