

Vijaykumar Karthikeyan

<https://www.linkedin.com/in/vijaykumar-karthikeyan/>

Phone – (859)894-0010 | Email – vijayk.karthik15@gmail.com | Los Angeles, CA

Education

University of California, Los Angeles (UCLA)

September 2024 - Present

BS – Bachelor of Science at UCLA Henry Samueli School of Engineering

- **Computer Science and Engineering** + Premed

Paul Laurence Dunbar High School (Lexington, KY)

August 2020 - May 2024

Math Science Technology Center (Selective Admissions)

360-hour Capstone Research Project – University of Kentucky

Unweighted GPA – 4.00 Weighted GPA – 4.83 ACT Super score – 35 ACT STEM Score – 36 16 AP Courses

Laboratory Experience

Undergraduate Researcher at Kamariza Lab

January 2025 - Present

- Working under mentorship of *Dr. Mirelle Kamariza* at the *UCLA Department of Bioengineering*
- Researcher part of **CRISPR-Cas13 Diagnostics** Team

Technical Project Experience

Machine Learning for Prediction of Intermolecular Interactions in Organic Semiconductors

2022 - 2024

- Worked under mentorship of *Dr. Chad Risko* at the *University of Kentucky Center for Applied Energy Research*
- Developed **Machine Learning script with PyTorch**, and developed Active Learning methods for strong models
- Wrote papers and **presented Research at High School Symposium** + Kentucky Science and Engineering Fair

Machine Learning for Health Prediction – Biomedical Engineering Society

2024 - Present

- Ongoing Project with UCLA Biomedical Engineering Society
- Lead **Backend Developer**, utilizing **Django Rest Framework** to build **AWS EC2 and RDS Database**

3D Tunable Magnetic Field for use in Particle Physics Experiments

2023 - 2024

- Constructed device that generates **3D Tunable Magnetic Field**
- Designed the device with CAD, setup up circuits, and coded software with MATLAB Arduino
- *Presented to University of Kentucky Engineering Department Staff*, received college credit

Skills

- Programming – Python, C++, C#, MATLAB, Java, JavaScript
 - **Machine Learning** and **Automation** experience in Python (**PyTorch**)
 - **Backend/Database Development** with **AWS** (Django Rest Framework) and **MongoDB**
- Computer skills – Linux CLI, Bash, Microsoft Office, CAD
- Languages – German (Working Proficiency); Tamil & Telugu (Native Proficiency)

Extracurricular Activities

- Biomedical Engineering Society at UCLA
 - Design Team – Machine Learning for Health Prediction
- VEST @UCLA
 - Working with startups to develop products for them