

Yajat Yadav

PERSONAL INFORMATION

Email	✉ yajatyadav@berkeley.edu
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Google Scholar	📖 Yajat Yadav
Github	🐙 yajatyadav
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EDUCATION

UC Berkeley 2022 – 2026

Bachelor of Science, Electrical Engineering and Computer Sciences

- GPA: **4.0** / 4.0; Eta Kappa Nu (EECS Honor Society), Machine Learning @ Berkeley, Neurotech @ Berkeley
- Researching robot learning, advised by Prof. Sergey Levine
- Selected EECS Coursework (**A+ in bold**, Grad classes underlined): Computer Vision, Learning Theory, Deep RL (audit), **Machine Learning**, **Optimization Methods**, Computational Photography, Combinatorial Algorithms, **Signal Processing**, **Controls**, **Operating Systems**, **Computer Architecture**
- Selected Math Coursework (**A+ in bold**): **Probability and Random Processes**, **Abstract Algebra**, **Abstract Linear Algebra**, **Discrete Math**, **Multivariable Calculus**

PUBLICATIONS AND PREPRINTS

Agent-Based Modeling for Patient-Centered Clinical Decision Support in Neuro-oncology 📄 2024

Eduardo Rodriguez Almaraz, Brenda Miao, **Yajat Yadav**, J de Groot, J Young, A Vo, A Butte, B S Mitchel, D Raleigh, N Butowski, Ahmed Alaa

Neuro-Oncology, Volume 26

VROOM: Visual Reconstruction over Onboard Multiview 📄 2025

Yajat Yadav*, Varun Bharadwaj*, Tanish Baranwal*, Jathin Korrapati*

Preprint, Class Project

ONG:Orthogonal Natural Gradient Descent 📄 2025

Yajat Yadav*, Jathin Korrapati*, Patrick Mendoza*

Preprint, Class Project

ACADEMIC EXPERIENCE

RAIL, UC Berkeley Aug 2024 - present

Undergrad Researcher

- Working with Prof. Sergey Levine on robot learning and foundation models.
- Researching generalizable finetuning techniques to robustly extend robot foundation models to unseen tasks.

- Experimented with self-distillation, scaling test-time compute, and reasoning models for planning long-horizon robotics tasks.

Center for Computational Biology, UC Berkeley

Jan 2024 - Jul 2024

Undergrad Researcher

- Worked with Prof. Yun Song on utilizing deep learning in various genomics tasks.
- Developed a multimodal deep net utilizing DNA sequence, structure, and taxonomy information to predict plasmids' origins of transfer.
- Designed a machine-learning based approach for choosing DNA primers to serve in HIV genome selective amplification experiments.
- Collaborated with biologists to experimentally validate predicted plasmid sites.

Computational Precision Health, UCSF

Jan 2023 - Dec 2023

Undergrad Researcher

- Worked with Prof. Ahmed Alaa on NLP for clinical-decision-making in oncology.
- Utilized domain-specific LLM agents to simulate clinical decision-making scenarios in neurooncology diagnosis, management, and treatment.
- Integrated insights from tumor board data to refine the natural language models.
- Worked with several independent UCSF clinicians to incorporate domain knowledge and validate model performance in real clinical settings.

Ley Lab, La Jolla Institute for Immunology

Jun 2021 - Nov 2021

High School Researcher

- Researched immune cell migration to inflammation sites.
- Analyzed gene expression data from millions of cells, as well as clinical data from 15+ hospitals, to identify predictive features of immune cell mobility.

INDUSTRY EXPERIENCE

Amazon Web Services

May 2024 - Aug 2024

Software Engineering Intern

- Developed AWS service for efficient propagation of AWS Orgs information through thousands of worldwide servers.
- Created a client-side library and algorithm for dynamically adjusting network requests, helping reduce 84% of timeout errors.
- Optimized service performance with distributed load testing, ensuring the service was robust to millions of requests/sec.

Borde. Inc.

May 2024 - Aug 2024

Machine Learning Engineering Intern

- A company working on ML-based, high-volume inspection and sorting of various crops.
- Implemented object detection CV models for real-time classification of various crops during machine processing (100+ unit/s).
- Coded a full-stack, websocket-based web app for streamlining the end-to-end process of labeling crop samples for sorting, configuring model training, and deploying/monitoring models at edge devices across 10+ farms.

TEACHING

Teaching Assistant

Spring 2025

EECS 126: Probability and Random Processes, UC Berkeley

Tutor + Reader

Fall 2024, Spring 2024

EE 120: Signals and Systems, UC Berkeley

Academic Intern

Fall 2023, Summer 2023

CS 70: Discrete Math and Probability Theory, UC Berkeley

Academic Intern

Summer 2023

CS 61B: Data Structures, UC Berkeley

Academic Intern

Spring 2023

CS 61A: Structure & Interpretation of Computer Programs, UC Berkeley

PROJECTS

Wetware Computing

Spring 24

Neurotech @ Berkeley

- Reproducing the DishBrain experiment by culturing neurons and using reinforcement learning with electrical stimulation to teach them simple games like Pong.
- Wrote programs for encoding/decoding electrical signals and interfacing with an OpenAI Gym environment, enabling bidirectional communication with the neurons.

Clarity Dashboard

Spring 23

Neurotech @ Berkeley

- Developed a React app for neurotechnology company Clarity. Features include secure storage of sensitive information, patient dashboard and live EEG session analytics.

Neural Focus Drviving

Fall 22

Neurotech @ Berkeley

- Utilized Brainflow and MNE libraries to process raw EEG data in order to compute a running focus metric used to drive a RC car just by thinking.

HONORS AND AWARDS

EECS Evergreen Undergraduate Research Award	2025
EECS Evergreen Undergraduate Research Award	2024
Dean's List (4 semesters)	2022 - 2024
Eta Kappa Nu EECS Honor Society	2022
Top 8 in Nation, USA Biology Olympiad	2020
Top 50 in Nation, USA Biology Olympiad	2021
Gold Medal, British Biology Olympiad	2021, 2020
Gold Medal, iGEM (Intl. Genetically Engineered Machine) Research Competition	2020

SERVICE

Eta Kappa Nu	Fall 2025
<i>Department Relations Head</i>	
<ul style="list-style-type: none">• Providing department tours to prospective high schoolers interested in UC Berkeley EECS.• Working with the EECS department to host town halls, infosessions, & advising hours.	
Eta Kappa Nu	Spring 2025, Fall 2024, Spring 2024, Fall 2023
<i>Professional Development Officer</i>	
<ul style="list-style-type: none">• Organized events like grad school panel, company infosession, etc. to connect the EECS community with professional opportunities.• Provided career-related services like reviewing resumes, conducting mock interviews, and connecting students with industry mentors.	

SKILLS

<i>Languages</i>	Python, Java, C++, C, Rust, Ruby, TypeScript, MATLAB, R, HTML/CSS, Bash, SQL, RISC-V, x86
<i>Machine Learning</i>	Jax/Flax, PyTorch, Tensorflow, OpenCV, SciPy, Hugging Face, Weights & Biases
<i>Web Development</i>	Reactt, Express.js, Django, Spring, JUnit, Mockito, Ruby on Rails
<i>Dev Tools</i>	Docker, Azure, AWS (EC2, S3, Lambda, CloudWatch), GitLab, Kubernetes, PostgreSQL, Berkeley DB