

# Yajat Yadav

## PERSONAL INFORMATION

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Email	✉ yajatyadav@berkeley.edu
Website	🔗 <a href="https://yajatyadav.com">https://yajatyadav.com</a>
Google Scholar	📖 Yajat Yadav
Github	🐙 yajatyadav
Linkedin	🌐 yajatyadav

## EDUCATION

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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 reinforcement learning and 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

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ONG:Orthogonal Natural Gradient Descent 📄 2025

Yajat Yadav, Jathin Korrapati, Patrick Mendoza

*NeurIPS 2025: Non-Euclidean Foundation Models and Geometric Learning Workshop, Class Project*

VROOM: Visual Reconstruction over Onboard Multiview 📄 2025

Yajat Yadav, Varun Bharadwaj, Tanish Baranwal, Jathin Korrapati

*Preprint, Class Project*

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*

## ACADEMIC EXPERIENCE

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Robotic AI and Learning (RAIL) Lab, UC Berkeley Aug 2024 - present

*Undergrad Researcher*

- Working with Prof. Sergey Levine on robot learning, foundation models, and reinforcement learning.
- Currently investigating multi-task reinforcement learning in robotics.

- Developed generalizable finetuning technique 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.
- 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.
- Worked with several independent UCSF clinicians to incorporate domain knowledge and validate our method 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**

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### **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

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### 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

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### 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

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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

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

## SKILLS

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<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