Tarang Srivastava

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# *Education*

## Undergrad | May 2022 | UC Berkeley (GPA: 3.8)

* Major #1: Computer Science (Major GPA: 3.8)
* Major #2: Applied Mathematics with Data Science Concentration (Major GPA: 3.96)
* Related coursework: Data Structures, Algorithms, Operating Systems, Security, Analysis, Machine Learning, Web Design, Linux Sysadmin, Android and iOS Development, ML in Multimedia, Data Science, Circuits, Compilers

## Highschool | june 2019 | south brunswick HS (GPA: 4.4)

* Outstanding Math Student, Governor School Nomination for top 3 in class of 706, Honor Roll

# *Experience*

## Lecturer | UCB Electrical Engineering & computer science Dept. | may 2022 – August 2022

* Lecturer and primary instructor for CS70 - Discrete Math & Probability Theory at UC Berkeley
* Delivered lectures to 450 students in-person and remote, wrote exams, managed course logistics

## Software Engineering Intern | Eluvio | May 2021 – august 2021

* Created a client facing DApp dashboard built on Vue.js for users to manage NFTs, collections and media
* Interacted with web3 using Ethers.js and worked closely with IPFS backend to create end-to-end application

## Research assistant | Research in AI for sustainable energy | September 2020 – may 2022

* First author on paper for low entropy reinforcement learning for solving energy optimizing problems
* Author on paper for personalized federated learning solutions for microgrid energy solutions
* Technical DevOps support for research team and ML engineering role in implementing models

## HEad Ta | UCB Electrical Engineering & computer science Dept. | may 2020 – may 2022

* Head Teaching Assistant for 5 semesters for CS70 at UC Berkeley (Student Evaluations: 4.8/5)
* Taught discussion sections, office hours, created course material, developed auto-grading software

## Software Engineering Intern | Vydia | May 2018 – august 2018

* Used React.js and react-native to add features to web and mobile application for artists and producers.
* Revamped testing and DevOps by transitioning to microservices using Docker.

# *Technical Skills*

* Python, Java, Go, Rust, C, C++, JavaScript, TypeScript, Swift, MATLAB, HTML/CSS, Linux, Pandas, SQL
* Android Studio, XCode, React, React Native, Vue.js, TensorFlow, PyTorch, Git, Docker

# *Projects and Publications*

* [*Adapting Surprise Minimizing Reinforcement Learning Techniques for Transactive Control*](https://dl.acm.org/doi/10.1145/3447555.3466590)*.* First author paper on use of low entropy RL to increase training time and stability in output actions.
* *Contextual Personalized Federated Hypernetworks for Privacy Preservation in Reinforcement Learning.* Author on paper for using personalized networks to share training data in privacy safe manner for reinforcement learning.
* *Federated Learning with Decentralized Networks*. Project on a federated learning network on Ethereum via smart contracts. Edge users can train locally and, in a privacy-safe manner share data. Control of model is decentralized.
* *LED Authenticator*. Device that shows LED patterns and works with Android app to provide 2-Factor Authentication