Rishi Tikare Yang

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As a junior studying computer science, I am looking to gain experience in the tech industry as an engineer or researcher, explore my interests and build opportunities and connections. I am interested in a variety of topics such as robotics, modeling, information theory, and machine learning as well as education, visual design, and linguistics.

EDUCATION

University of California, Berkeley — **Berkeley, CA**
Bachelor of Arts in Computer Science - GPA: 3.82/4.0 — *Class of 2024*

- CS 61 A/B/C – Computer Programs, Data Structures, Machine Structures
- CS 70/170 & EECS 126– Probability and Discrete Math, Algorithms, Random Processes
- EECS 16 A/B – Circuits, Linear Algebra, Machine Learning, Control and Signal Processing

Albuquerque High — **Albuquerque, NM**
GPA: 4.7/4.0, ranked 5th in class of 347 — *Class of 2020*

- Three sport varsity athlete, Captain of Soccer and Cross Country teams, National Merit Scholar

PROJECTS

RISC-V CPU — **CS61C**
Class Project — *Spring 2022*

- Designed a complete CPU on a virtual circuit design software for the RISC-V instruction set
- Included a 2-Stage pipeline and the associated data hazard infrastructure

Memory and Parallel Programming — **CS61C**
Class Project — *Spring 2022*

- Optimized dense matrix multiplication through memory management and parallel programming
- Used OpenMP and achieved speedups of ~300x when compared to naive approaches

Voice Controlled Car — **EECS16B**
Class Project — *Fall 2021*

- Built a voice controlled car in a team of two using a microcontroller, breadboard, and other components
- Implemented circuit design, control using feedback, system ID, signal processing, and classification/ML

Gitlet — **CS61B**
Class Project — *Fall 2021*

- Built version control system modeled after Git to track and commit file changes, revert to older saved versions, and create and merge branches of code.
- Implemented search and sort algorithms as well and functional data structures

Godot Video Game — **Self Led**
Solo Project - https://github.com/rishikiram/Easternly-Apps — *Summer 2021*

- Created an endless side scrolling, ship driving video game including all of the art and code. Used various open source software, namely the Godot engine.
- Implemented an endless, random, procedural generation algorithm and a custom physics model

EXPERIENCE

Berkeley Engineers and Mentors — **UC Berkeley Club**
Site Leader — *August 2020–Present*

- Education club at UC Berkeley focused on inspiring interest in STEM fields and providing accessible science lessons to our local communities
- Lead a group of 4-5 college students to teach science lessons every week at a local elementary school
- Organize STEM-related volunteer events with the broader community

UC Berkeley Club

CalSol *January 2023–Present*
Electrical Team Member

- Engineering club to design, build, test, and race fully solar-powered vehicles.
- Electrical team works on battery management systems, telemetry, motor controller, sensors and data collection, and miscellaneous electrical components
- Design PCBs in KiCad, write firmware for microcontrollers, write software for data collection, integrate components onto the car

University Immunology Laboratory **UNM Health Sciences**
Paid Research Intern *Summer 2019*

- Study the effect of lactic acid on the motility of T-cells under Professor Judy L. Cannon
- Work both in the lab to isolate, cultivate, and film T-cell samples, and on a software program to quantify motility using computer vision techniques

SKILL AND INTERESTS

Programming Languages - Python, Java, C, RISC-V, HTML, SQL, Scheme
Interpersonal - Leadership, teamwork, communication skills. Fluent in English and Spanish
Interests - Sports, outdoors activities, choral singing, cooking, computer art, languages
Study Abroad - Studied Latin American Studies and CS at UNAM in Mexico City in the Fall of 2022