

# Akash Basu

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## EXPERIENCE

### Undergraduate Research Assistant, SET Lab

Jan 2023 – Present

*UC Santa Cruz*

*Santa Cruz, CA*

- Researches human computer interaction that enhances physical and emotional experiences through technologies such as VR/AR
- Works with javascript frameworks like Three.js in order to create 3D models that address real-world dilemmas
- Collaborates closely with peers and research head in order to create multi-user VR applications

### Cashier

Jul 2022 – Aug 2022

*KikuSushi Japanese Restaurant*

*Cupertino, CA*

- Contributed towards remodeling the grocery store inside the restaurant along with the outside eating area, increasing overall sales by 10%
- Communicated between kitchen staff and weekly delivery workers regarding the shipment of ingredients and grocery store items
- Trained three new cashiers for the morning shift, night shift, phone orders, etc.)
- Managed online orders from platforms like Door Dash, Uber EATS, and Grub Hub, which led to an increase in revenue
- Discounted items 2-3 hours before closing by 30% in order to get customers to purchase more items, increasing overall sales

### Intern

Jun 2017 – Aug 2017

*Computer History Museum*

*Mountain View, CA*

- Collaborated closely with fellow interns and supervisors to create an interactive presentation on coral reefs at California Academy of Sciences(Created an interactive typing game using Java similar to Space Invaders) with 100s of people attending with 25% of attendees visiting our booth
- Managed tours of at least 40 people consisting of 3 different exhibits for tourists(Hollerith Tabulating Machine, Utah Teapot, Apollo Guidance Computer)
- Provided on-site help and assistance for tourists regarding exhibits and directions, reducing customer complaints regarding navigation difficulty inside the museum

## PROJECTS

### HTTP/1.1 Web Server | *Python, Sockets*

March 2023

- Web server implemented in python that responds to HTTP/1.1 GET requests using sockets and a provided root directory and returns appropriate error response based on the HTTP version, type of request, or lack of a web object

### Password Cracking Server | *C++, Sockets*

December 2023

- Multithreaded web server implemented in C++ with POSIX threads that utilizes load balancing and socket libraries to receive, crack and send back multiple passwords from a master server that periodically sends up to 8 hashes

### Author Identification | *C*

Mar 2022

- Uses the k-nearest-neighbors algorithm with a hash table, bloom filter, and priority queue in order to calculate one of three distance metrics(manhattan distance, euclidean distance, cosine distance) to determine text similarity between authors of books

## EDUCATION

### University of California, Santa Cruz

Santa Cruz, CA

*Bachelor of Science in Computer Science:Game Design, Minor in Computer Science, GPA:3.61* Oct 2020 – Jun 2024

## TECHNICAL SKILLS

**Languages:**C/C++, Python, JavaScript, Rust, BASH, DB Browser for SQLite

**Spoken Languages:**Japanese(Conversational), Spanish(Conversational)

**Frameworks:**Three.js

**Developer Tools:** Git, Docker, VS Code, Visual WSL2

**Certifications:**Python Specialization(Coursera), Supervised Machine Learning:Regression and Classification(Coursera)