Sulekha Kishore

[su-lay-ka], she/her

sukishore12@gmail.com
linkedin.com/in/sulekha-kishore

EDUCATION

California Institute of Technology (Caltech)   **2021-2025 (expected)**
- **B.S,** double major in **Computer Science** and **Political Science** GPA: 4.1 / 4.3
- Cambridge University, Corpus Christi College, Study Abroad Program, Michaelmas (Fall) 2023

Temple City High School, Temple City, California GPA: 4.0 / 4.0   **2017 - 2021**

RESEARCH

Computer Vision for Satellites   **Autonomous Robotics & Control Lab, Caltech**
Prof. Soon-Jo Chung   **Apr 2024 - Present**
- Trained & deployed IR vision-based object detection model for satellite using knowledge distillation
- Developed & tested EdgeNode Lite satellite mission operations to enable on-orbit model training
- Created synthetic infrared spacecraft dataset to fill lack of real space data for model training

Social and Information Networks Research   **Independent Research Project, Caltech**
Prof. Adam Wierman   **Apr 2024 - Oct 2024**
- Developed novel algorithm to reduce polarization in social network graphs by leveraging common ground
- ***Publication:*** *IEEE Xplore*, "Finding Common Ground: a Two-Opinion Approach to Reducing Polarization in Networks." *2nd Best Paper Award*, MIT Undergraduate Research Technology Conference

Computational Science Science Research   **Alvarez Group, Caltech**
Prof. R. Michael Alvarez   **Mar 2023 - Present**
- Developed open-source probabilistic record linkage Python package to improve maintenance of voter registration databases by utilizing GPU computation. 35x speed up on testing of 1.8 million voter records
- *Paper under review, JOSS.* "Fast-ER: GPU-Accelerated Record Linkage and Deduplication in Python"
- Identification of demographic groups with high mail ballot rejections in 2022 Washington state election

Data Pipeline for Real-Time Transient Detection   **Kasliwal Group, Caltech**
Prof. Mansi Kasliwal   **Jun 2022 - Sep 2022**
- Created data pipeline for nightly data from WINTER, an IR telescope at Palomar Observatory
- Develop Python package: integrated WINTER data into open-source projects, SkyPortal & Kowalski
- ***Publication:*** "A data science platform to enable time-domain astronomy", *The Astrophysical Journal Supplement Series*, Vol 267, Number 2 (July 2023)

NASA BIG Idea Challenge 2022: Extreme Lunar Terrain   **Caltech *AIAA* Team**
Project Advisor: Prof. Soon-Jo Chung   **Sep 2021 - Jun 2023**
- Designed autonomy requirements for cabled system to transverse lunar regolith
- Lab manager of on-campus student-run lab for 60+ person team
- Project won Visionary Concept Award (engineering work & demonstration), 2022 BIG Idea Challenge

Flight Software Development   ***STAR* Lab, MIT**
Prof. Kerri Cahoy   **Jun - Sep 2021**
- Development of BeaverCube satellite flight software, integration & testing of 3 major sensors
- Designed flight software communications system, successfully launched & deployed in 2022

PROFESSIONAL EXPERIENCE

Software Engineering Intern   **Starfish Space, Seattle, WA**
Satellite Operations Team   **Jun - Sep 2023**
- Created and successfully deployed on-orbit software update system for OtterPup satellite
- Developed PostGreSQL, Google Cloud backend database for live satellite data downlinking

Undergraduate Admissions Ambassador   **Caltech, May 2023 - Present**
- Student ambassador and blog writer for the undergraduate admissions office
- Tour guide (70+ campus tours given) and online & in person panelist for prospective students

TEACHING (TA)

Networks: Algorithms & Architecture (CS/EE 143), Caltech, *Prof. Adam Wierman*   **Fall 2024**
- Invited to develop 1st iteration of curriculum on network theory, online algorithms, and queuing theory
- Host office hours, advise students on research presentations, and grade weekly problem sets

Decidability & Tractability (CS 21), Caltech, *Prof. Chris Umans*   **Winter 2023, Winter 2024**
- Host office hours for students and grade weekly proof-based sets for this Theory of Computation course

LEADERSHIP & COMMUNITY SERVICE

President, Science Olympiad Planning Team, Caltech   **Sep 2021 - Present**
- Lead team of 30+ to organize State Science Olympiad tournament for 2k+ students at Caltech
- Raised $50k in funds for tournament and science outreach; volunteer at monthly science outreach nights
- Led first-time initiative to host 42 lab tours for 250 middle & high school students; now annual event

Student Executive Committee & Board Member, Caltech Y, Caltech   **Feb 2022 - Present**
- Organize monthly events and volunteer for Caltech Y, an independent 501c3 organization
- Student Activism Speaker Series (SASS) Committee Lead: organize & host over 30 speakers
- Organized 6-part 2024 Election talk series, VP Debate Watch Party, & Election Night Watch Party
- Student leader and organizer for 2024 D.C Science Policy Trip for 20 undergraduate & graduate students

Captain, Aftermath (Ultimate Frisbee Team), Caltech   **Jan 2022 - Present**
- Organize 3x per week practices for 40-person team, compete in USAU Div III Southwest Division

Elected Representative, Board of Control, Caltech   **Apr 2022 - Present**
- 4-yr elected member on campus-wide committee adjudicating academic Honor Code violations, 100+ hrs
- 1 of 6 students selected for faculty & student Honor Code Steering Committee, student Chair

Research Ambassador, Student-Faculty Programs, Caltech   **Sep 2024 - Present**
- Assist undergraduates with summer research opportunities through Caltech's research programs
- Organize monthly workshops & office hours for assisting students with the application process

Vice President, Windsurf and Surf Club, Caltech   **Jan 2022 - Present**
- Organize & promote surf trips for 300+ members, host women/gender-minority surfing trips

AWARDS and HONORS

Arnold O. Beckman Political Award, Caltech Y   **Nov 2024**
- Awarded $6k for summer internship exploring voting systems, technology, & election administration

Carl F. Braun SURF Fellow, Caltech   **Summer 2024**
- Summer Undergraduate Research Fellowship (SURF) funding, advised by Prof. Soon-Jo Chung

SanPietro Travel Prize, Caltech   **Jun 2024**
- 1 of 2 students awarded for 2-weeks of travel in Greece, exploring historical and natural sites

Club of the Year: Science Olympiad Planning Team, Leadership Award, Caltech   **Jun 2024**
- Awarded for leadership & outstanding impact on campus & wider-community through Science Olympiad

Certificate of Congressional Recognition, U.S. House Representative Judy Chu (CA-28)   **Apr 2024**
- In recognition of unwavering dedication and commitment to supporting academic excellence and for creating opportunities for students in science
- Leadership and planning of the 2024 Southern California State Science Olympiad Tournament for over 2000 students from across Southern California

Alan Porter Memorial SURF Fellow, Caltech   **Summer 2022**
- Summer Undergraduate Research Fellowship (SURF) funding, advised by Prof. Mansi Kasliwalk

TechGirls Alumni Outreach Ambassador, U.S. Department of State   **Jul 2020**
- Awarded by US Bureau of Educational and Cultural Affairs for exceptional voluntary services in efforts to promote exchange experiences across the US and continued engagement with international TechGirls
- Assisted international TechGirls with community projects virtually in Uzbekistan & Algeria