

# Gaurav Bhatnagar

gbhatnagar2013@gmail.com • (408) 824-0983 • [linkedin.com/in/gaurav-bhatnagar](https://www.linkedin.com/in/gaurav-bhatnagar) • [github.com/mech-a](https://github.com/mech-a)

---

## EDUCATION & COURSEWORK

---

### UC Berkeley – Management, Entrepreneurship, & Technology Program

Aug. 2020 – Expected May 2024

B.S. Electrical Engineering & Computer Science, B.S. Business Administration, GPA: 3.72

Selected Coursework: Operating Systems & System Programming, Introduction to Artificial Intelligence, Efficient Algorithms & Intractable Problems, Probability & Random Processes, Signals & Systems, Introduction to Robotics, Data Structures & Algorithms

## EXPERIENCE

---

### Correlia Biosystems (YC W18), Berkeley, CA

June 2022 – Aug. 2022

#### *Software Engineering Intern*

- Implemented outlier removal algorithms for noisy n-channel fluorescent images to improve variability with NumPy, Pandas, and OpenCV in Python; reduced target metric of coefficient of variation by significant margin of 20%
- Designed, built, and presented real-time dashboard utilizing Plotly Dash and Pandas in Python that interfaced with power supply and pneumatic log files for remote maintenance of diagnostic assays; achieved <100ms latency

### Dataherald (YC W21), Los Angeles, CA

May 2021 – Sept. 2021

#### *Software Engineering and Product Management Intern*

- Designed 10+ real-time, live visualizations by using Apache Airflow (AWS MWAA) to automate Pandas and Requests scripts in Python to scrape & send data to PostgreSQL and MongoDB (AWS DocumentDB) to store visualization
- Led the development of the Census 2020 visualization series by creating product requirements, programming FTP scraping script, and leading day-of release; achieved best-at-time 1st-day performance: >140,000 readers & 500,000 impressions
- Restructured 300GB PostgreSQL (on AWS RDS) table by tuning RDS settings, rebuilding indices, partitioning, and installing management scripts to reduce average query time from 3min to 20s
- Implemented Agile Scrum as Scrummaster to prioritize backlog of 50+ custom visualization requests with Operations, CEO, & CTO and delegated to backend team of 3-5 engineers

## PROJECTS

---

- **FratBot (Python, ROS, OpenCV)** | Nov. 2022 – Dec. 2022: Designed ROS system on Rethink Robotics Sawyer platform to play beer pong by detecting cups via OpenCV and planning & executing a ball throw with Pyomo; played 3-cup game
- **Kutils (Python, Twitter, YouTube, Discord, Google Sheets APIs)** | Jan. 2020 – Feb. 2022: Developed Discord bot to report dead hyperlinks in Google Sheets; shipped alpha to server of 2,000+ users

## COMMUNITY

---

### UC Berkeley Department of EECS, Berkeley, CA

Sept. 2021 – Present

#### *Undergraduate Student Instructor: Discrete Mathematics and Probability Theory*

Jan. 2023 – Present

- One of ~20 selected to conduct section to 40 students, office hours, and proctor exams for core class of ~700 students
- Wrote onboarding document for graders to prepare them on efficiently grading homework and conducting helpful office hours

### UpSync Consulting, Berkeley, CA

Sept. 2020 – Present

#### *VP of Business Development*

May 2021 – Dec. 2021

- Oversaw ~30 consultants and 9 project managers on consulting projects for start-up and midsize companies
- Co-led sourcing of 5 start-up to midsize companies among 9 project managers via LinkedIn messages and cold emailing

## RESEARCH

---

### Center for New Music and Audio Technologies, Berkeley, CA

Aug. 2021 – May 2022

- Completed research under SJSU Asst. Prof. Andrew Blanton on rendering live motion capture data into 3D virtual spaces
- Developed UDP-reading JavaScript client and Node.js server sending low-latency BVH data, successfully rendered in Three.js

## SKILLS & INTERESTS

---

- **Skills:** Python (Pandas, NumPy), Java, C/C++, Rust, SQL, ROS, AWS (MWAA, EC2, IAM), MongoDB, PostgreSQL
- **Interests:** Ice Skating, Music Production, Photography