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Abhineet Ram, Ph.D.

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github.com/arram-phd
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Dedicated scientist seeking to transition into data science. My background includes a comprehensive skill set in both wet and dry lab techniques, ranging from high throughput screens to advanced machine learning applications.

Skills

Tools and Languages	**Python**, MATLAB, Git, ImageJ, R, Command-Line/Linux, Screener, SQL, SnapGene LaTeX
Quantitative Research	Data Analysis, **Image Processing**, Bioinformatics, Machine Learning, Statistics, Modeling
Wet Lab	Fluorescence Microscopy, Cell Culture, Multiplex Immunofluorescence, In-situ hybridization, CRISPR
Professional	Experimental Design, Teaching, **Communication**, Training, Leadership, Presentation

Professional Experience

Scientific Account Manager — **June 2024 – present**
Genedata — *San Francisco, CA*

- Utilized AI/machine learning based work flows to facilitate image data and surface plasmon resonance analysis.
- Provided scientific consulting for top 25 bio-pharma companies, completing 20+ support cases.
- Lead client meetings, trainings, and software demos leading to 3 new clients and ongoing leads.

Postdoctoral Researcher — **May 2023 – January 2024**
University of California, Davis — *Davis, CA*

- Collaborated with virologists to develop a plate-based method to quantify viral plaques using microscopy and image analysis.
- Trained/mentored technicians in microscopy and programming resulting in 4 successful graduate school admits.
- Performed analyses of bulk and single-cell RNA sequencing data using DESeq2, identifying metabolic stress regulated genes.

Quantitative Cell Science Intern — **June 2022 – August 2022**
Chan Zuckerberg Biohub — *San Francisco, CA*

- Implemented a Python pipeline for image processing resulting in a tool for spectral unmixing on multi-channel images.
- Developed a spectral model to simulate fluorescence intensities, facilitating quantitative experimental design.
- Configured ANDOR Dragonfly confocal microscope for multi-camera acquisition leading to a 2x increase in throughput.

Graduate Student Researcher — **August 2017 – May 2023**
University of California, Davis — *Davis, CA*

- Researched biomarkers of MAPK signaling using live-cell FRET imaging and multiplexed IF using Nikon Ti2 Eclipse.
- Employed **systems biology** to model cell signaling and gene expression leading to a quantitative understanding of MAP Kinases.
- Automated cell segmentation, cell tracking, and intensity quantification using image processing in MATLAB.

Education

Doctor of Philosophy: Biochemistry, Molecular, Cellular, & Developmental Biology — *University of California, Davis*
Bachelor of Science: Cell Biology — *University of California, Davis*

Publications (*First author)

1. *Deciphering the History of ERK Activity from Fixed-Cell IF.... (In Press, **Preprint**). — ***Nature Communications* 2025**
2. Spatiotemporal Clusters of ERK Activity Coordinate Cytokine-induced Inflammatory Responses... — ***AJRCMB* 2024**
3. *A Guide to ERK Dynamics, part 1: mechanisms and models. — ***Biochemical Journal* 2023**
4. *A Guide to ERK Dynamics, part 2: downstream decoding. — ***Biochemical Journal* 2023**
5. Live-Cell Sender-Receiver Co-cultures for Quantitative Measurement of Paracrine Signaling... — ***Methods Mol. Biol.* 2023**
6. *ERK signaling dynamics: Lights, camera, transduction. — ***Developmental Cell* 2022**
7. Entosis is induced by ultraviolet radiation. — ***iScience* 2021**
8. Systems-Level Properties of EGFR-RAS-ERK Signaling Amplify Local Signals to Generate Dynamic... — ***Cell Systems* 2020**

Awards

National Institutes of Health: T32 Training Award 2019, IMSD Fellow 2018
Dean's List UC Davis College of Biological Sciences 2013, 2014
BMCDB Graduate Group Fellowship 2017
UC Davis Alumni **Leadership** Award 2012

Extracurricular Activities

Volunteer for Youth Science Outreach 2017 - 2020
UC Davis PREP Admissions Committee 2019
NCAA Division I Track and Field 2012 - 2016
Graduate Group Recruitment Committee 2019, 2020
American Society for Cell Biology Organizing Committee 2020
National record of Fiji, Hammer Throw 2016