

# SIDHANT PUNTAMBEKAR

## Computer Scientist | Computational Biologist

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My research interests lie at the intersection of computer science and molecular biology to utilize computational methods to streamline biological data analysis. My other programming interests are object oriented programming and full stack development.

## EDUCATION

- 2019–2023 **Computer Science Bachelors, Molecular Biology Minor, Computational Biology Minor**, University of Colorado, Boulder. **GPA : 3.958**. CU Esteemed Scholar, AMS Undergraduate Scholar
- 2015–2019 **International Baccalaureate Diploma**, Fairview High School. AP with Distinction, State Qualifier-Speech/Debate

## EXPERIENCE

- Present**  
**May 2021** | **Bioinformatics Research Intern, SUNYAEV LAB, Harvard Medical School**  
‣ Incoming Summer Institute in Biomedical Informatics Research Intern Summer 2021  
[R](#) [Python](#)
- Present**  
**May 2020** | **Bioinformatics Research Intern, RNA BIOSCIENCE INITIATIVE, CU Anschutz Medical School**  
‣ Primary author on research essay regarding the scRNA-seq metadata submission problem with NCBI GEO and other gene expression databases. Published in PLOS Biology journal.  
‣ Developed RShiny web application for the clustifyr R library in order to facilitate analysis of scRNA-seq data.  
‣ Conducted a meta-analysis of scRNA-seq data sets from NCBI Gene Expression Omnibus and Tabula Muris (mouse scRNA-seq atlas) utilizing principal component analysis, graph based clustering, and uniform manifold approximation and projection.  
[R](#) [RShiny](#) [Python](#) [scRNA-seq](#) [clustifyr](#) [clustifyrdata](#)
- Present**  
**May 2020** | **Tech Team Director, HACKCU, University of Colorado Boulder**  
‣ Migrating site over to NextJS to integrate backend and database as well as content management system  
‣ Developed the new HackCU one stop shop main website ([hackcu.org](https://hackcu.org)) utilizing full stack development tools and continuous integration (CI/CD) as part of the technology/software development team.  
[ReactJS](#) [NextJS](#) [TypeScript](#) [JavaScript](#) [Python](#) [GraphQL](#) [CI/CD](#)
- May 2020**  
**January 2020** | **Learning Assistant, COMPUTER SCIENCE DEPARTMENT, University of Colorado Boulder**  
‣ Assisted students in learning material for CSCI 1300 : Starting Computing course by holding weekly office hours, answering student questions in recitation period, and participated in crafting lesson plans.  
[C++](#)
- January 2019**  
**June 2018** | **Research Intern, NATIONAL CENTER FOR ATMOSPHERIC RESEARCH, Boulder, CO**  
‣ Researched landfalling tropical cyclones along the US eastern coastline to improve computational forecasting models using statistical analysis and data visualization from Extended Best Track Hurricane data set.  
‣ Presented research at 99th American Meteorological Society conference in Phoenix, Arizona.  
[MATLAB](#) [Perl](#) [Unix Shell](#)

## PROJECTS

### CYBERHOOD

HACKCU VI HACKATHON

[github.com/SidhantPuntambekar/team-cyberhood-1](https://github.com/SidhantPuntambekar/team-cyberhood-1)

- Developed a wifi sniffer program called Cyberhood which aggregates data from users joining a network and displays it on a web server leveraging database services and cloud computing.
- Designed with Kismet wifi sniffer, Google Cloud Platform as well as full stack tools such as MongoDB, JavaScript, and HTML.

[Python](#) [Jupyter Notebook](#) [Google Cloud Platform](#) [MongoDB Atlas](#) [MongoDB Compass](#) [HTML](#) [CSS](#) [JavaScript](#)

## SKILLS

Languages	C++, Python, Java, R, HTML5, CSS, TypeScript, JavaScript, MATLAB
Testing Tools	Mocha, Chai, Jest, Cypress
Continuous Integration Tools	TravisCI, CircleCI, Jenkins
Production Tools	Google Cloud Platform, Netlify, AWS, Git, Heroku, Docker/Kubernetes, NPM
JavaScript Technologies	ReactJS, Bootstrap, NodeJS, ExpressJS, PassportJS
Databases	MongoDB Atlas, MongoDB Compass, MySQL, PostgreSQL
Operating Systems	Mac OS X, Linux (Ubuntu), Windows