Avanti Shrikumar

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Education

Stanford University *Sep 2014 - present*

- PhD in Computer Science under Professor Anshul Kundaje

Massachusetts Institute of Technology *June 2013*

- B.S. Computer Science with Molecular Biology, Minor in Mathematics *GPA 5.0/5.0*

Experience

Palantir Technologies Healthcare Team - *Forward Deployed Engineer* *June 2013 - Sep 2014*

- Primary developer for team's first enterprise deployment. Created a way to integrate Palantir's two major platforms into a seamless experience; success was highlighted company-wide. Built multiple code libraries off-the-clock for use team-wide and company-wide; 3 ongoing patent filings/discussions.
- Consistently rated high on bi-annual reviews, in which lead (Lekan Wang) told me I had at times done the work of 2-3 coders and had set a new standard for productivity among my teammates.

MIT Computational Biology Group (Kellis Lab) - *SuperUROP* *Sep 2012 - June 2013*

- Without supervision of a graduate student, applied a Hidden Markov Model to identify transcription factor binding sites using histone modification data. Won an award for outstanding research.

MIT Boyer Lab - *UROP* *Sep 2010 - Sep 2012*

- Analyzed high-throughput data on cardiac stem cells. Exercised autonomy on how best to process the data to answer biological questions. As I matured as a researcher, I tested my own hypotheses and presented results to my Postdoctoral colleague. See publication. Supervisors: Professor Laurie Boyer, Dr. Joseph Wamstad.

Publications

Cell - *Sep 2012*

- Collaboration between Boyer lab at MIT and Gladstone Institute. I performed the bulk of bioinformatics analysis at the Boyer lab. **Dynamic and coordinated epigenetic regulation of developmental transitions in the cardiac lineage**. Cell 151, 206-220.
- 104 citations as of Sep 2014.

Circulation Research - *Dec 2014*

- Collaboration between Boyer lab at MIT and Lee lab at Harvard. I analysed RNA-seq data to study transcriptional reversion. **Transcriptional Reversion of Cardiac Myocyte Fate During Mammalian Cardiac Regeneration**. Circ Res. 2014 Dec 4. pii: CIRCRESAHA.114.304269.

Skills

Programming

- Primary languages: Java (primary language at Palantir), Python (primary language during PhD; personal emphasis on code reusability in contrast to 'hacky' culture of bioinformatics), Perl (for "quick and dirty")
- VPython: Personal coding projects in high school. Simulations of Rubik's Cube and Sudokube: http://www.youtube.com/watch?v=fLvs5nvT2j8
- Moderate experience in SQL/PostgreSQL, Javascript/CSS/HTML, R and MATLAB.

Interesting

- Calculator art with parametric equations http://www.youtube.com/watch?v=r-I5M--fvJQ)
- Acted in multiple student theater productions at MIT, directed for one.

Achievements & Honors

SuperUROP Outstanding Research Award

- For project "Doubling the precision of DNA binding site prediction using a novel dataset" in Kellis lab

American Institute of Chemical Engineers Sophomore Academic Excellence Award

- Awarded to the student with the highest GPA among chemical engineering sophomores at MIT.

IGCSE examinations

- The IGCSE was administered in roughly 300 schools in India. I had the highest score in India in Extended Mathematics Without Coursework (June 2006), Physics(June 2007) and Geography (June 2007).