

# Amulya Garimella

## Education

- May 2025 **Harvard College**, Cambridge, MA.  
A.B., Anticipated joint concentration in **Computer Science** and **Molecular & Cellular Biology**.
- June 2021 **Fox Chapel Area High School**, Pittsburgh, PA.  
GPA: 4.49 weighted/4.0 scale, top decile. National Merit Finalist.

## Publications

- Anticipated 2021 **Alzheimer's disease genetics informs the development of blood-based epigenetic biomarker.**  
**Amulya Garimella**, Easwaran Ramamurthy, Dr. Lei Hou, Dr. Manolis Kellis, Dr. Andreas Pfenning  
On track for submission to **Nature Aging**. Invention disclosure submitted; patent filing procedure underway.

## Skills

### Technical.

HTML, Python (incl. pandas, matplotlib/seaborn, sklearn, click, scipy), MATLAB, R (incl. Bioconductor tools e.g. DESeq2), biological data analysis tools (bedtools, HOMER, GREAT, GSEA, DAVID, MEME suite, ENCODE ChIP-seq analysis pipeline), shell-scripting (incl. SLURM experience), Adobe Illustrator

### Laboratory.

Experience with basic molecular biology skills and protocols including plasmid preps, restriction enzyme digestions, bacteria culturing, and gel electrophoresis. Exposure to PCR and cell culture protocols.

## Experience

- Oct 2018 – Present **Neurogenomics Lab**, *Carnegie Mellon University*, Pittsburgh, PA.  
Research Assistant
  - Developed **machine learning algorithms to find epigenomic blood biomarkers for Alzheimer's Disease**
  - Conducted computational analysis on biological data using Python, R (incl. Bioconductor), shell-scripting; created complex data visualizations using matplotlib, seaborn, Adobe Illustrator; performed molecular biology experiments in a lab setting
  - Selected as **one of 72 high-school students nationally** to attend the UPMC Hillman Cancer Center Academy research program; served as a **reviewer** for the 2020 American Medical Information Association Symposium
  - Collaborated with **Kellis Lab at MIT, first high-school student in Neurogenomics Lab**
- Jun 2020 – **Zero App**.  
Aug 2020 Volunteer - On-the-ground, Software Development, Marketing teams
  - Volunteer (**sole high-school student on team**) for contact tracing app for **2020 DNC**
  - Helped with front-end coding, developed on-the-ground strategy for 2020 DNC, conducted research on every state's use of contact tracing and outreach to businesses in New Rochelle, NY
- May 2020 – **Draw Attention Project**.  
Nov 2020 Creator
  - Drew portraits of activists and essential workers, featured art alongside quotes and donation info on social media
  - Art displayed in local museums; raised money for local activists
- Aug 2018 – **Annual Fox Chapel STEM Symposium**.  
Nov 2018, Head Student Organizer & Symposium Chair  
Nov 2019 –
  - Organized STEM conference for 200+ high-school students focusing on computational biology and AI  
Feb 2020
  - Raised \$2,500 to fund the event for 2018-2019 with one sponsor, \$4750 for 2019-2020 with three sponsors. In 2019-2020, **allocated \$3000 to scholarships for 6 underprivileged school districts** to cover costs of transportation

## Honors

- 2020 **National Winner**, *Aspirations in Computing Award*.  
National Center for Women & Information Technology
  - Selected as **one of 40 award recipients out of over 4,700 applicants** nationally.
- 2019 **National Fellow**, *she++ #include Fellowship*.
  - Selected as **one of 50 national #include fellows** helping drive tech education in their community