Amulya Garimella

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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 at **Kellis Lab @ MIT, first high-school student in Neurogenomics Lab**
Jun 2020 – Aug 2020	**Zero App**. 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 – Nov 2020	**Draw Attention Project**. 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 – Nov 2018, Nov 2019 – Feb 2020	**Annual Fox Chapel STEM Symposium**. Head Student Organizer & Symposium Chair ○ Organized STEM conference for over 200 high-school students focusing on computational biology and AI ○ 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 ○ Hosted researchers and entrepreneurs from local universities and companies; over 200 students from the Greater Pittsburgh Area, including students from underprivileged schools

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