Amulya Garimella

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Education

2017–2021	**Fox Chapel Area High School**, Pittsburgh, PA. GPA: 4.40 weighted/3.99 unweighted, top decile

Honors

2020 — **Finalist**, *Art to Activism.*

B.Y.E + Mattress Factory
- Selected as one of 6 finalists, featured on panel with rest of finalists, work displayed in digital and physical gallery as well as Mattress Factory shop, proceeds donated to activists featured

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 all over the country

2020 — **Regional Affiliate Winner**, *Aspirations in Computing Award.*

National Center for Women & Information Technology, Western & Central PA Affiliate

2019 — **National Honorable Mention**, *Aspirations in Computing Award.*

National Center for Women & Information Technology
- Selected as one of 360 award recipients out of over 4,300 applicants all over the country

2019 — **National Fellow**, *she++ #include Fellowship.*
- Selected as one of 50 national #include fellows helping drive tech education in their community

2018 — **2nd Place**, *Covestro Pittsburgh Regional Science and Engineering Fair.*

Senior Biology Category
- Won for "Computational Biology Approach to Identifying the Genetic Pathways that Impact Neurodegenerative Diseases"

2018 — **Regional Affiliate Honorable Mention**, *Aspirations in Computing Award.*

National Center for Women & Information Technology, Western & Central PA Affiliate

2017 — **Carnegie Science Award**, *Covestro Pittsburgh Regional Science and Engineering Fair.*

Outstanding project in Intermediate Division
- Won for "Pensieve: Analyzing the Genes that Affect Memory"

2017 — **1st Place**, *Covestro Pittsburgh Regional Science and Engineering Fair.*

Intermediate Biology Category
- Won for "Pensieve: Analyzing the Genes that Affect Memory"

2016 — **1st Place**, *Covestro Pittsburgh Regional Science and Engineering Fair.*

Intermediate Biology Category
- Won for "Brainwave: The Distraction Prevention Invention"

2015 — **National 3rd Place**, *Discovery 3M Young Scientist Challenge.*

Selected as one of ten national finalists; won third place overall
- Won for "Brainwave: The Distraction Prevention Invention"

2015 — **Congratulated on the floor of the U.S. Congress**, *Congressman Keith Rothfus.*
- Recognized for "Brainwave: The Distraction Prevention Invention"

Experience

2020   **Zero App**.

Volunteer - On-the-ground, Development, Marketing teams
- Contact tracing app which provided health attestation at DNC 2020; determines the safety of local businesses in the community during the COVID-19 pandemic
- Helped with on-the-ground strategy for DNC 2020
- Front-end coding
- Research on every state's use of contact tracing
- Outreach to businesses in New Rochelle, NY to gauge use of safety measures
- Only high-school student working on team

2020   **AMIA Symposium 2020**, *American Medical Informatics Association*.

Reviewer

2019   **UPMC Hillman Cancer Center Academy**.

Hillman Academy Scholar
- Selected as one of 72 high-school students to attend the program
- Conducted research at the Neurogenomics lab with mentors Dr. Andreas Pfenning and Easwaran Ramamurthy
- Conducted research into epigenetic blood biomarkers for Alzheimer's Disease
- Presented preliminary results at the end of the program

October 2018 - Present   **Neurogenomics Lab**, *Carnegie Mellon University*, Pittsburgh, PA.

Research Assistant
- Work on high performance computing clusters
- Conduct statistical analysis on genomic (RNA-seq) and epigenomic (ChIP-seq) data
- Create complex visualizations using R and Python
- Code in R and Python, have experience with using AWS, SLURM clusters
- Collaborated with team at Kellis Lab @ MIT
- Only high-school student working on team

July 2018 - August 2018   **Heart Input Output, Inc.**, Pittsburgh, PA.

Machine Learning and Data Science Intern
- Researched the use of ML to predict coronary artery disease
- Assisted with grant-writing (NSF SBIR)
- Created website with integrated dashboard

Projects & Awards

2017 - 2018   **Computational Biology Approach to Identifying the Genetic Pathways that Impact Neurodegenerative Diseases**.

Investigating potential connections between brain development and neurodegeneration.

Awards
- 1st Place at Pennsylvania Junior Academy of Science Region 7, Biology
- 1st Place Pennsylvania Junior Academy of Science States
- Pennsylvania State Finalist for the Biotechnology BioGENEius Challenge
- 2nd Place, Covestro Pittsburgh Regional Science and Engineering Fair, Senior Biology category

2016 - 2017   **Pensieve: Analyzing the Genes that Affect Memory**.

Found a novel connection between the development of the hippocampus and Alzheimer's Disease.

Awards
- Carnegie Science Award, Intermediate Division
- 1st Place, Covestro Pittsburgh Regional Science and Engineering Fair, Intermediate Biology category
- 1st Place, Perfect Score, Pennsylvania Junior Academy of Science States
- National Finalist at ProjectCSGirls competition
- National Broadcom MASTERS Semifinalist

2015 - 2016 **Brainwave: The Distraction Prevention Invention**.
Created a wearable device that works with an EEG headset to provide alerts to a user when they get distracted, based on their brainwaves.

Awards
- 1st Place, Covestro Pittsburgh Regional Science and Engineering Fair, Intermediate Engineering & Robotics category
- National 3rd Place in Discovery 3M Young Scientist Challenge
  - National Finalist in Discovery 3M Young Scientist Challenge
- 1st Place, Invention Category, Pittsburgh Teen Media Awards

Media
- These Prize-Winning Young Scientists Will Make You Feel Better About the Future, Fox & Friends
- Resume: A newsmaker you should know / 12-year-old Amulya Garimella is finalist for 'America's Top Young Scientist', Pittsburgh Post-Gazette
- Young Achiever: Amulya Garimella, TribLive

Other Recognition
- Congratulated on floor of US Congress, Keith Rothfus

Activities

2019 - Present **FoxTales Quarterly**, Fox Chapel Area High School.
Editorial Board Editor-in-Chief & Student Editor
- Wrote articles for quarterly student magazine
- Founded Editorial section and wrote opinion articles
- Wrote for other publications such as the local Shady Ave Magazine

2019 - Present **VOTE Club**, Fox Chapel Area High School.
Club Co-Founder & Vice President
- Organized voter registration drives in school
- Spread awareness on how and why to vote

2018 - Present **STEM Symposium**, Fox Chapel Area High School.
Head Student Organizer & Symposium Chair
- A pioneering high school bioinformatics conference, the STEM Symposium introduced the concepts of computational biology to high school students of all skill levels and interests
- Raised $2,500 to fund the event for 2018-2019 with one sponsor, $4750 for 2019-2020 with three sponsors
- In 2020, hosted 10 presenters from local universities and companies; and over 200 students from the Greater Pittsburgh Area, including students from underprivileged schools
- In 2020, gave $3000 to 6 underprivileged school districts to cover costs of transportation and substitute teachers
- Created Symposium website and other outreach materials

2018 - Present **STEM Outreach Club**, Fox Chapel Area High School.
Club Founder & President
- The STEM Outreach Club aims to blend volunteer work with STEM education, giving members the opportunity to both teach and learn
- Club provides STEM exposure to students in middle and elementary school by conducting hands-on workshops and educating students about STEM careers

2018 - Present **Women's Issues Today**, Fox Chapel Area High School.
2019: Vice President
- Stocked free feminine hygiene products in school restrooms
- Educated students on feminism and women's issues in the US and globally

2008 - Present **Tang Soo Do Karate College**.
2nd Degree Black Belt, 2017
- Practice traditional Korean martial arts (Tang Soo Do)

Skills

Programming.
HTML, JavaScript, NodeJS, C++, Ruby, Python, MATLAB, R, Creating websites from scratch

Presentation & Public Speaking.

Event Organization.

Fundraising.