

# Amulya Garimella

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## Education

2017–2021 **Fox Chapel Area High School**, Pittsburgh, PA.  
GPA: 4.45 weighted/4.0 scale, 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 Finalist**, *National Merit Scholarship*.
  - Selected as one of 7 semifinalists at Fox Chapel Area HS. One of 15,000 finalists nationally. (competition still ongoing)
- 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"

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## Experience

Summer 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

Summer 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

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

Research Assistant

- Conduct computational analysis on biological data
- Develop machine learning algorithms to find epigenomic blood biomarkers for Alzheimer's Disease
- 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
- Invention Disclosure submitted; patent filing and publication underway
- Only high-school student working on team

Summer 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

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## 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

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## Activities

### 2020 **[Draw Attention Project](#).**

Creator

- Draw portraits of activists and essential workers
- Feature art alongside quotes and donation info on social media
- Raise money for local activists

### 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 nonpartisan 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)

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## Skills

### **Programming.**

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

### **Presentation & Public Speaking.**

### **Event Organization & Fundraising.**

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