

VIGNESH RAJMOHAN

Greer, SC

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EDUCATION

James L. Mann Academy of Math, Science, and Technology

GPA: 4.0 **Weighted GPA:** 5.31 **Class Rank:** 2/374

AP Coursework: Calculus AB & BC, Computer Science A & Principles, Statistics, Physics 1 & 2, Biology, Macroeconomics, US Government, US History, World History, Psychology, Environmental Science, Human Geography, English Language and Composition, Literature

SAT Super-score: 1500 (Math: 790, English: 710) Essay: 20/21

SAT Subject Tests: Math Level 2: 740, Biology E: 740

PSAT: 1440 (Math: 750, English: 690)

ACT Super-score: 34 (English: 35, Math: 35, Reading: 32, Science: 34) Essay: 33

EXPERIENCE

Summer 2017: Research at Oak Ridge National Laboratory and University of Tennessee

Student Researcher

- Researched the abilities of *Moringa oleifera* as a coagulant and its effectiveness in the removal of common deadly metal-based water pollutants.
- Researched the abilities of an RGB color picker as a device to quantify turbidity.

Summer 2017: Research Collaboration with Professors from the Massachusetts Institute of Technology

Student Researcher

- Researched the abilities of Bluetooth Modules HC-05 and HM-10 abilities for pairing and sending and receiving data
- Researched the abilities of tilt sensing accelerometers on effectiveness to control robotic operations
- Founded an open source robotics startup: Wav3bot, a robotic device that utilizes accelerometer data for input. Website: wav3bot.github.io
The open source nature of project lead to its development around the world, where various applications are currently being developed and explored.
- Conducted research on the effectiveness of LEAP Motion sensing technology on robotics applications

Summer 2015-2017: SC Chamber of Commerce South Carolina Business Week

Participant

- 2017** Selected as CEO of company and for the Manufacturing in SC project.
- Recipient of the S. Hunter Howard Scholarship
- 2016, 2015** Explored local, national, and global business through immersive simulations, talks and discussions by influential business leaders, and interactions with diverse business-oriented students.
- Selected as CEO of company
- Recipient of the Chelse Ward Eliot Scholarship

Summer 2017: American Legion Palmetto Boys' State

Participant

-Explored local government and politics through experience in speech delivery, elections, campaigning, and studying relations between parties

Summer 2016: Massachusetts Institute of Technology LaunchX

Participant

-Studied the best methods to go about entrepreneurial efforts and learned entrepreneurial strategy through texts and case studies.
-Became a certified LaunchX Entrepreneur

Summer 2015: Accelerate Program Boot camp by Clemson University and the Governors' School for Science and Math

Participant

-Developed electronics and robotics projects under the guidance of professors from respective schools

RESEARCH

2017: A Novel Purification Process for Extracting Potable Water from Contaminated Water in Developing Countries Using Ready Available Materials

2017: Refer to Summer 2017: Research Collaboration in EXPERIENCE

2016: A Study on the Ability and Effectiveness of Quad-rotors to Pollinate Flowering Plants

2015: A Study on the Reliability, Versatility, and Effectiveness of Compact Carbon Capture Devices (CCCD)

2014: A Study on the Effect of Surface Temperature and Salinity on the Amount of Carbon Dioxide Ocean Water Can Absorb to Create Carbonic Acid

2013: A Novel Method of Comparing Antioxidant Levels Using the Briggs Rauscher Oscillating Reaction

**SCHOLARSHIP,
AWARDS, AND
HONORS**

2017 S. Hunter Howard Jr. Scholarship

2017 SC Science Olympiad Environmental Science State Champion

2017 Science Olympiad Newberry College \$8000 Scholarship recipient

2017 SC Region 1 Science Fair First Place Champion

2017 Regional Stockholm Junior Water Prize

2017, 2016 MLK Youth Award for Academics

2017 Head Junior Marshall (1st in Class)

2017-2012 Piano Guild National Competition: Superior Rating

2017, 2016 Academic Letter w/ Bar

2017 Boy Scouts of America: Life Scout Award

2017, 2016 National AP Scholar with Distinction

2016, 2015 Google Science Fair Honored Participant

2016 Selected to Compete at National Judicial Competition (NJC) for mock trial

2015 Chelse Ward Eliot Scholarship

2015 J. L. Mann School Science Fair 1st Place Champion

2014 Ace Award for Character

2014 Battle of the Brains: State Champion (Captain of Team)

2014 Beta Club Quiz Bowl Nation Competition: 3rd Place

2014 SC Piano Federation Room Winner Runner-up State Champion

2014 Discovery Education 3M Young Scientist Challenge State Merit Winner
2014 NASA Humans in Space Art Contest 3rd Place in Watercolor
2013 National History Day World Competition: Group Display Finalist
2013 NASA and Clemson University NHHCP Asteroid Competition 2nd Place
2013 Taekwondo 3rd Degree Level 4 Black Belt

EXTRA-CURRICULAR ACTIVITIES

2015-Present J. L. Mann Circuit Club (Electronics and Programming) (Founder and President) (Website: manncircuitclub.github.io)
2017 Varsity Track and Field
2014-2016 FRC Robotics
2015-Present Student Council (Class President) (2017-2018: Student Body Treasurer)
2011-Present YouTube Channel (“Vignesh Rajmohan” on Youtube)
2015-Present Digital Music Production (“Vignesh Rajmohan” on SoundCloud)
2016-Present iT2Pi (Local Innovator and Developer Organization) Member
2015-Present YMCA Youth in Government
2014-Present Roper Mountain Astronomers Club
2014-2016 Junior Varsity Golf
2015-Present Web Design, App Development, Electronic and Robotics Research and Development (Languages: Java, Python, html, css, Objective-C, Swift, Arduino, App Inventor, TI-Basic) (GitHub account: “VigneshRajmohan”)
2005-Present Piano
2015- Present Spanish Culture Club
2014-2016 Varsity Baseball: Statistician
2014-Present Academic Team (Core Team Member)
2016-Present National Honors Society
2015-Present Science Olympiad
2017 Political Awareness Club (Liberal Party Leader)
2016-Present Outdoors Club (Co-President)
2016-Present Environmental Club
2014-2015 Ping Pong Club

COMMUNITY SERVICE

2014-Present Roper Mountain Science Center Volunteering for Summer Camps and Second Saturday Events (Total of 200+ hours)
2016-Present Mentored FLL Lego Robotics Teams and selected to volunteer as a project judge, robotics technicality judge, and robot performance referee at various tournaments at the state and national level. (60+ hours)
2015-Present (2017) As Student Body Treasurer, raised \$206,432
 (2015, 2016) Helped raise over \$340,000 for local charities through Student Council Spirit Weeks as class of 2018 president (twice)
2011-Present Fall for Greenville (Total of 36 hours)
2016-Present Tutoring students on math and science afterschool (Total of 25 hours)
2011-Present Various service projects through the Boy Scouts

ENTRE-PRENEURIAL LEADERSHIP

2015 Founding of Mann Circuit Club, a club focused on improving education in programming, circuitry, making, and entrepreneurship in the J. L. Mann and Greenville County Community run with a sponsorship from the iT2Pi organization.
2017 Planning and directing the introduction of a Maker-space into J. L. Mann and a hack-a-thon (Hack Mann) for all of Greenville County (Website: hack-mann.xyz)
2017 Open-source robotics startup (Wav3bot), a novel and innovative method to interact with technology using accelerometer input. The open source nature of the

project has led to several variants being in development around the globe. (Website: wav3bot.github.io)

2017 Project Untether, a nonprofit awareness campaign for the developing world regarding water purification methods based around the readily available *Moringa oleifera* plant to break the tether between corporations and people in need of potable water. This in turn empowers the people of developing countries and allows for their stable and autonomous development.