Abheek Dhawan

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Location: St. Louis, MO

EDUCATION

Ladue Horton Watkins High School — St. Louis, MO
High School Diploma | GPA: 4.00/4.00 | ACT: 36/36 — *August 2020 - May 2024*

Courses: *AP Physics C: Mechanics and E&M, Calculus III, AP Calculus BC, AP Chemistry, AP Computer Science A, AP Statistics, AP English Language, AP English Literature, AP Spanish Language and Culture, AP Spanish Literature and Culture, AP World History, AP US History, AP US Government and Politics*

SKILLS

- **Languages**: C, C++, Go, Python, TS/JS
- **Frameworks**: SpaCy, Next, Mongoose, Rebound, NumPy, Lenstronomy
- **Tools**: Docker, Git, JetBrains IDEs, Visual Studio Code, Google Suite, Microsoft Suite
- **Platforms**: Linux, macOS, Windows, Web, Arduino, Raspberry Pi, Digital Ocean
- **Academics**: Advanced Physics and Astrophysics, Advanced Calculus (Vector, Multivariable), Statistical Data Analysis, Working Proficiency in Spanish

EXPERIENCE

Medicardia — Remote
Programmer (Part-time, Internship) — *September 2021 - Present*

- **NLP Patient Report Processing**: Utilized Natural Language Processing to parse natural language patient reports and tag important medical information such as medication and demographics.

Washington University — Remote
Researcher (Part-time, Internship) — *August 2023 - Present*

- **Lenstronomy Software**: Utilized the Python Lenstronomy package to model strong gravitational lensing.
- **Relativity**: Learned relativity concepts in order to better understand the applications of code I had written.

Summer Science Program — On-site
Researcher (Full-time, Internship) — *June 2023 - July 2023*

- **Orbital Element Determination**: Utilized the Morehead Observatory at UNC-Chapel Hill to take images of an asteroid, and implemented the Method of Gauss in Python to calculate the orbital elements of the asteroid and model its orbit.
- **Advanced Physics and Mathematics**: Gained knowledge over topics like relativity, cosmology, and vector calculus in addition to the programming and astrophysics knowledge necessary to complete the research task.

EXTRACURRICULARS

- **Ladue Horton Watkins High School Computer Science Club President**: Organize lessons every week for over 40 members with interactive activities and lead the Ladue Middle School Computer Science Club for students that are being introduced to computer science. (2 years)
- **Ladue Horton Watkins High School Sociedad Honoraria Hispanica Junior/Senior President**: Plan and run meetings, partner with organizations such as the World Pediatric Project to facilitate cultural service opportunities for over 60 members. As one of the most proficient juniors in Ladue's Spanish language program, I was one of 18 students in the country to be presented with the Bertie Green Travel Award last year. (2 years)
- **Ladue Middle School Science Olympiad Solar System Coach**: Prepare presentations, resources, and tests for kids aged 11-14. Presentations are universal in the field of astronomy and not narrowly scoped into Science Olympiad. (3 years)
- **Bel-Nor School STEM Club Robotics Mentor**: Provided mentoring services to young robotics teams, reaching out and volunteering with a team at a North County elementary school. (1 year)
- **Coding Academy St. Louis**: Founded and run a nonprofit called the Coding Academy St. Louis or CASTL, a 501(c)(3) that aims to promote coding among youth in my community, such as the aforementioned STEM Club and teaching 4 classes w/ almost 50 kids total at our local Chinese school. Recruited 8 dedicated mentors to accomplish this through teaching programming and robotics. (2 years)

HONORS AND AWARDS

- Presidential Service Gold Award - 2021
- National Spanish Exam Bronze - 2022
- Nexus Mods verified mod author - 2022
- Discord verified bot & active developer - 2022
- 23rd at National Science Bowl - 2022
- 48 in US at Natl Astronomy Competition (71 intl) - 2022
- 1st at Missouri Science Olympiad Astronomy - 2022
- National Spanish Exam Silver - 2023
- AATSP Bertie Green Junior Travel Award - 2023
- 21 in US at Natl Astronomy Competition (29 intl) - 2023
- AP Scholar with Distinction - 2023
- National Merit Semifinalist - 2023