#### Vansh Bhatt

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## Education

# **Allen High School**

• Weighted GPA: 4.04/5.00

• Class Rank: 352/1582

# *August 2021 – May 2025*

### Extracurriculars

# NASA HUNCH (High Schools United with NASA to Create Hardware) (Position: Project Lead Developer)

11th grade 5-18 hrs/week | 78 weeks

- Took part in a competition where NASA hands a problem in a selection of different topics and a team has to create a pitch of the solution.
- Brainstormed and created pitches for effective file sharing protocols for sending data to the moon and back without data hack or corruption
- Learned and developed extensive cybersecurity protocols for competition
- Designed and created project website
- Designed, engineered, and programmed physical demo of satellite tracking turret that tracked motion and moved physically in same direction as detected object
- Used Python, OpenCV libraries, Stepper Motors, RasperryPis, and Adafruit Sheild Board
- Learned to engineer with 3D printers and CNC Machines
- Team presented in Nationals at NASA Johnson Space Center in Houston, TX

#### **Lowery Freshman Center FTC Robotics (Position: Programming Lead)** 9th arade 6 hrs/week | 21 weeks

- Worked on both building and programming a robot from scratch to compete in FTC competition
- Led team of four other programmers to creation bot
- Tested, debugged, and drove robot to perform series of tasks such as grabbing objects and turning wheels
- Used skills in Java and displayed effective teamwork and leadership strategies
- Competed in February of 2021

#### iCode School (Position: Intern)

10th grade 4hrs/week | 4 weeks

- Volunteered and helped instructors in summer camps to teach numerous computer skills to kids K-12
- Communicated with parents at the end of the week on children's skills
- Had 16 volunteering hours

# **Toys for Texans (Position: Social Media Manager)**

10th grade 7 hrs/week | 21 weeks

- Used various skills in video editing, photoshopping, and graphics design
- Created 100+ posts for student-led non-profit
- Helped contribute \$5k-10k worth of toy donations for children in need across Texas

# **DECA (Position: Member/Competitor)**

11th grade 2 hrs/week | 17 weeks

- Stepped out of comfort zone and learned about numerous skills and lessons in a different field
- Studied hospitality/tourism
- Learned how to pitch business ideas in short time and under pressure
- Used problem-solving strategies to tackle problems regarding topics in hotel management or tourist marketing

# Launchpad EDU (Position: Lead of Curriculum)

11th grade 4 hrs/week | 12 weeks

- Helped launch STEM startup for children
- Developed 50+ hours of content for the non-profit STEM school

#### Research

# Machine Learning Engineering at Cambridge Future Scholar Program (Position: Student Researcher)

12th grade 3-14 hrs/week | 13 weeks

- Worked and collaborated with Harvard Schmidt Science Fellow Dr. Hannah Rana and University of Cambridge Research Student Arun Kumar
- Learned and researched uses and development of Machine Learning models
- In support of Dr. Rana and Mr. Kumar, started research on Star Classification types with Hertzsprung-Russell diagram and the creation of a classification model
- Used scikit-learn, supervised learning, and random forest model to classify stars based off their temperature, luminosity, radius, star color, and spectral class
- Trained off of 400+ data points
- Performed perfectly  $(1.0 r^2 \text{ value})$
- Created presentation to demonstrate my findings to Dr. Rana and fellow peers (https://bit.ly/MLEngVBPresentation)

# **University of Texas at Dallas Research Workshop (Position: Internship/Student Researcher)**

12th grade 3 hrs/week | 9 weeks

- Worked with a UTD professor on analyzing search algorithms and data algorithms in Java
- Created and showcased different uses of code that can minimize search algorithm time complexity

#### Work

## iCode School (Position: STEM Instructor)

11th grade and 12th grade

6 hrs/week | 90 weeks

- Instructed kids K-12 in a variety of coding skills like Python, HTML, and Java all the way to engineering with 3D design
- Instructed over 30 classes
- Worked with parents and sent emails at the end of each week on each student's progress as well as an extensive report on what was covered in class.
- Was able to stay active in my community by creating an impact on children

#### **Honors and Awards**

#### **NASA Hunch National Software Finalist**

11th grade

• Awarded to the select few teams who had the opportunity to present their creative solutions to actual NASA Engineers to possibly have their idea on the International Space Station

# Allen ISD Eagle Scholar College Readiness Standard

10th grade

• The Eagle Scholar award is awarded to students who display academic achievement in various areas in school

# **National Honor Society**

12<sup>th</sup> grade

• Students are qualified through academic achievement and recognized at a school level

# **Clubs and Organizations**

# **Computer Science Forum**

11th grade – 12th grade

• Partook in club activities that included tutoring underclassmen computer science students, lecturing students on Machine Learning, and judging hackathons

# **Volunteering**

# **Toys for Texans Thanksgiving Fundraiser**

10<sup>th</sup> grade 4 hours

• Raised money by selling hot chocolate to supply children in poverty with donation money for toys

## **North Texas Food Bank**

10<sup>th</sup> grade 3 hours

• Packaged food into boxes for people in poverty in the Dallas-Fort Worth area

#### **DECA Canned Foods**

11th grade 2 hours

• Donated canned items and sorted and organized them into boxes to later transport them into trucks that deliver them to people in poverty

#### **Eagle Give Day**

10<sup>th</sup> grade 2 hours

 A school ran fundraiser where some students were able to help transport boxes into trucks full of donated items

#### Skills

- Parent and Children Communication
  - o Obtained through working with various clients at iCode
- Languages
  - o English, Gujarati, Hindi
- Problem Solving
  - Acquired through various programming projects
- Leadership
  - o Demonstrated through NASA Hunch and FTC Robotics
- Photo and Video Editing
- Python, HTML/CSS, Java

#### **AP Scores**

AP Human Geography: 4

AP World History: 4

AP United States History: 4

AP Statistics: 4

# **Personal Projects**

#### **Personal Website:**

https://theogflamez.github.io/PersonalWebsite/