

# Shahriar Khan

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## Objective

UMASS Amherst sophomore with strong interests in applying Physics Skills from previous courses for tutor for Peer Tutoring or SI tutoring for the UMASS LRC.

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## Education

Computer Engineering(CE), University of Massachusetts, Amherst [Cumulative GPA: 3.562] — Class of 2026  
Arlington High School [ Weighted GPA: 4.56 | Unweighted: 3.85 ] — Class of 2022

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## Relevant Collegiate Courses (Completed and Concurrent)

First Year: Intro to ECE, Calculus II, Intro to Python, Introduction to Digital and Computer Systems, Ord Diff Equations

Second Year: *Advanced Programming, Intro to Linear Algebra, Computational Tools for ECE, Complex Numbers, Circuits and Electronics I*

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## Computer Science and Community Experiences

### Design Student Experience (Sept. 2018 - Feb 2021)

- 3D drafting and designing in 'CADD' (Inventor and Solidworks) and 'Art and Tech' (Sketchup and Tinkercad).

### Online Learning and Programming (Dec. 2022 - Present)

- Completed interactive Bookstore Project, Polynomial Calculator, Million Song Dataset (MSD) Storer and Retriever, Food Devlivery Service Optimization Project (VS Code, Pycharm - [Python 3 Language](#))

### Science Olympiad Club Membership (Oct. 2019 - May 2022)

- Researched, created study sheets and/or made competition devices to compete in science-based events

### Volunteer at Robbins Library (Jul. 2019 - Aug. 2019)

- Organized bookshelves, cleaned in Teenzone, filed new books in and old books out for all literary levels

### Physics 151 Note-taker for Disabilities Student (Oct. 2022 - Dec. 2022):

- Posted review notes of Physics topics for both Midterm Exams and made sure student was confident with topics

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## Skills and Experience

- Language Proficiency: English (Native, First Language), Bangla (Speaking Only).
- Google Workspace and Microsoft Word
- VS Code, PyCharm - Python 3: Experiences to Object-Oriented and Procedural Programming, and Data-Structures
- Collaboration and help in E&C Engineering Projects, Labs, and Homework

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## Open Links:

### Notable Technology-Related Works/Projects:

CADD, Art & Tech, AP CSP:

[https://drive.google.com/drive/folders/1reZE9Gt9lOa9fe1lio-H\\_rmdom7Z94ob?usp=share\\_link](https://drive.google.com/drive/folders/1reZE9Gt9lOa9fe1lio-H_rmdom7Z94ob?usp=share_link)

### Recent Polynomial Calculator, Bookstore Projects:

Polynomial main code: [https://drive.google.com/file/d/1J-ld\\_Y2raCnookKyR3dIpZb\\_MGPSVDSz2/view?usp=sharing](https://drive.google.com/file/d/1J-ld_Y2raCnookKyR3dIpZb_MGPSVDSz2/view?usp=sharing)

Polynomial Project 1: <https://drive.google.com/file/d/1tRmyFYaVlFA3kSBK8CWzCKY5k2ZG6x7y/view?usp=sharing>

Bookstore Project 2: <https://drive.google.com/file/d/1lJJj5Bf4NoeaByG1jvJO9uQ3DcjevG4Z/view?usp=sharing>

Bookstore Inventory:

<https://drive.google.com/file/d/1bMmWm954LJ3V7OZheKsWoa6Kmp8dFcNT/view?usp=sharing>

Book file complement: <https://drive.google.com/file/d/1ggbfuTqO5lTRuFvESvmu8RoRWwo-rjnZ/view?usp=sharing>

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## Interests:

- Applying my knowledge in known subjects to help my peers with their assignments and help my own understanding, known as the Feynmann Method
- Enjoying solving equation and concept-based problems, especially those in Ord. Differential Equations and Physics II

- Learning Computer Hardware and how it interacts and determines software functionality and behavior
- Learning Computer Programming languages in hopes of working with programming professionally

### **Vericel Interview Preparation:**

A1: I am Shahriar, 18 year old Arlington resident. I am planning to major in Computer Engineering at UMASS Amherst. My Bangladeshi parents immigrated here in 2001. Ma was a physics teacher, Baba was a math lecturer. I am a STEM student interested in Computers.

A3: I am applying to be an intern because I would like a job at a company that constantly practices in the biomedical and technological sciences. This is the kind of job I want in the future, and applying as an intern would be appropriate for me as a recent high school graduate. I hope to progress to higher level roles at Vercel or another company in the future.

A4: I want lab experience and I want to work for a serious company that aims to progress research, promote teamwork and employee meetings and aims to produce better product. I would love company work experience.

A5: Job work: Like a bio student, but with a company with serious documentation and new skill building with senior members with experience

A6: Vericel is located in Cambridge, and if I work in Cam. with my father, we'll both work at the same company gaining experience in similar fields,. Not only that, I'd also be exposed to

- Google Workspace and Microsoft Word

### **Laboratory experimenting, preparation, and maintenance**

- Developed from Honors Biology, Honors Chemistry, and AP Chemistry. Experience with Kirby-Bauer Antibiotic testing in Honors Biology.

### **Science Olympiad Club Membership (Oct. 2019 - May 2022)**

- Researched, created study sheets and/or made competition devices to compete in science-based events such as Gravity Vehicle (Mechanics), Detector Building (Circuits and Particle Chemistry) and more.

### **Online Learning and Programming (Sept. 2020 - Present)**

- Gaining Programming experience with platforms LEGO Mindstorms, Code.org, and Scratch. Learning from the Coursera courses: "HTML, CSS, and Javascript for Web Developers" and "IBM Cybersecurity Analyst Certificate Program".

- Co-Completed a Polynomial Calculator Project in VS Code in Python Language

#### **Resume to-be in Five years:**

- Practiced in Design-Thinking Process
- Schedule planning/Weekly Task and Conclusion Recording and Management
- Notekeeping and experimental documentation

#### **Awards**

##### **Award of Excellence for participation in the 2022 Massachusetts State Science Olympiad tournament**

- Awarded 6th place ribbon for 2022 State Aerial Scramble Event; earned 20th place for 2020 Harvard-Brown tournament for the Gravity Vehicle Event (Student-Created-Impound-Device event)

##### **Scholastic Awards (Arlington High School)**

- Class Academic Achievement Award in Foundations of English (2019) [Academic-Content Mastery]
  - Class Citizenship Award in Spanish Honors (2019) [Civill Engagement, Collaboration, and Contribution]
  - John and Abigail Adams Scholarship (The Commonwealth of Massachusetts, mastery of MCAS )
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## **QUALIFICATIONS, EDUCATION AND EXPERIENCE**

### **Leaderships Qualifications:**

#### **Leadership qualifications include, among other requirements:**

- **Understanding, observing, and adhering to the goals and policies outlined in Vericel's Code**

**of Business Conduct and Ethics**

- **Being honest and treating people with respect and courtesy.**
- **Constantly striving to make Vericel a great place to work, and a company respected for the quality of its people and products.**
- **Serving as role models for our fellow employees and business partners by acting responsibly, fairly, and honestly in our dealings and exercising sound judgment in performing our jobs.**

**Basic Qualifications:**

- **Knowledge of cell culture and molecular biology techniques**
  - **Conducted a Streptomycin test on B.Cereus and E. Coli growths in separate agar petri dishes in Honors Biology.**
- **Lab notebook experience preferred**
  - **Online Chemistry notebook kept and utilized throughout the year for Honors Chemistry. In AP Chemistry, we simply added notes and diagrams in our notebooks as we attended lectures and performed labs.**
- **Understanding of data analysis, troubleshooting, and interpretation]**

**Created extensive lab reports in Honors Biology (XYZ) and analytical labs in Honors and AP Chemistry. We analyzed our hypotheses and provided explanations based on content knowledge on why experimental results went with or against our hypotheses.**

- **Effective written and oral communication skills.**
  - **In Honors Biology, Honors Chemistry and AP Chemistry, we complete class activities using the POGIL method, with my group members and I participating and competing POGIL activity sheets in class, both online and in-class**