# Shrijit Banerjee

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## EDUCATION

**Boston University | College of Engineering** **Boston, MA**
*Bachelor of Science in Mechanical Engineering, Minor in CS* *Expected May 2025*

- **Relevant Coursework:** MATLAB, Multivariate Calculus, Physics I & II, CAD, Computational Linear Algebra, Mechanics I, Circuits, Material Science, Differential Equations, Data Abstraction

- **Extracurriculars:** Theta Chi, SILab Advisor, BU "Command Lab" Research Assistant, Ice Skating, Boston University Society of Manufacturing Engineers, The Bunion Paper

## SKILLS

**Languages:** Java, JavaScript, C, C++, C#, Python, Ruby, MATLAB, HTML, Dart, Kotlin
**Applications:** Microsoft Suite, Google Suite, Android Studio, Solidworks, AutoCAD, Arduino, Raspberry Pi, Onshape, CATIA, OVITO

## PROJECTS

***Forest Fire Simulator - Cupertino Public Works***

- Assessed damage of forest fires and calculated the optimal density of vegetation required to reduce probability of wildfire spread by 23% in Santa Clara County natural reserves for Cupertino Public Works Department.
- Code utilized Object Oriented Programming and Monte Carlo Simulation in Java. Developed framework and co-built API that visualizes simulations graphically in real time.
- Corresponded with local government and gas and electric companies by allocating funds for surveying machines and marking regions needing to be monitored and measured. Expounded upon ability to take initiatives, communicate, and gain a greater understanding of systems and local infrastructure by working alongside industry professionals.

***K-Means Clustering - Fremont High School AP Computer Science***

- Coded framework for high school Computer Science class that utilizes signal processing-based methods to sort input data into k number of labeled clusters.
- Discovered how to structure lesson plans alongside teachers to instruct students on neural networks and perceptrons classifying images into clusters. Tutored students on API outside of class hours.

***Temperature Sensing Apparatus***

- Constructed and coded a compact room temperature monitor that detects spikes and drops in ambient temperature and alerts users. Applied Kirchoff's Laws and Design-for-Assembly (DFA) principles, utilizing Arduino components and CAD.
- Designed and implemented low-voltage circuits, optimized assembly through implementation of standard parts, creating built-in fasteners, automating original (non-Arduino) part production.

## EXPERIENCE

***SILab Advisor - Boston University College of Engineering*** **Spring 2023 - Present**

- Supervise and provide guidance to SILab users, fostering a welcoming and productive environment
- Manage safety training for individuals, regular cleaning and organization of SILab space to ensure a safe and efficient work area
- Respond promptly to inquiries regarding SILab and provide regular reports of SILab activity