

# Siddarth Rajkumar

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Mechanical and biomedical engineering sophomore with hands-on experience in CAD design, prototyping, and data analysis. Strong background in MATLAB, SolidWorks, and project-based teamwork.

## EDUCATION

### Tufts University – Anticipated May 2028

GPA – 3.90

BS in Mechanical Engineering & Biomedical Engineering

Relevant Courses – Materials and Manufacturing, Thermal Fluid Systems, Mechanics (Statics and Dynamics)

### Johnston High School – May 2024

GPA 4.36, JV Swim Captain, Technology Student Association Secretary, Science Olympiad Captain

## SKILLS

**Prototype Oriented:** Machining, SolidWorks, Stereolithography Printing, Fused Deposition Modeling

**Software Tools:** Microsoft Suite, MATLAB, Java, C++

## PROJECTS

### Pulse Oximeter

- Modeled a pulse oximeter for the dual ratio measurement system
- Manufactured chassis using fused deposition modeling
- Manufactured light refraction channels using stereolithography

### CO2 Powered Dragster

- Designed 3D printed dragster using Autodesk Inventor
- Won 2<sup>nd</sup> place in 2024 and 4<sup>th</sup> place in TSA competitions
- Developed three prototypes before finalizing dragster body

### Obesity Rate Analysis

- Analyzed 12 years of federal obesity data using MATLAB to identify casual factors to its increase
- Isolated socioeconomic and cultural factors to determine most affected groups

### Community Board Game

- Designed board game with McCall Middle School students that combined education and entertainment to introduce climate change concepts to middle schoolers
- Developed pieces using laser cutting and 3D printing to develop pieces, employed co-development skills and prototyping
- Worked as group of three

## EXPERIENCE

### DOIT Lab | Medford, MA | *Research Assistant*

Sept 2025 – Present

- Designing CAD casing for prototype pulse oximeter at Tufts DOIT Lab

### Kohl's | Ankeny, IA | *Sales Floor Associate*

June 2025 – Aug 2025

- Directed fitting room traffic, provided customer service support, restocked merchandise

### Bayshine Trading Inc. | Clive, IA | *Production Team Member*

June 2023 - Aug 2024

- Inventoried laptops, reported damaged devices, unlocked phone carriers, printed IMEI numbers

## EXTRACURRICULARS

### Tufts University | Medford, MA | *Solar Vehicle Member*

Oct 2025 – Present

- Sanded aeroshell to improve aerodynamics
- Infused carbon fiber with resin to produce car chassis

### Tufts University | Medford, MA | *Swim Club Member*

Sept 2024 – Present

- Participated in swim practices and events

### Tufts University | Medford, MA | *IEEE Member*

Sept 2024 – May 2025

- Networked and learned about electrical engineering field, learned soldering

## VOLUNTEERING

### Johnston High School | Johnston, IA | *Swim Coach*

Feb 2022 – March 2024

- Instructed middle school swimmers on technique, created practice sets and exercises to improve cardio and breath capacity