

SHIVIN RAJESH ANAND

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EDUCATION

MIDDLETON HIGH SCHOOL

Engineering Magnet; GPA: 3.9

Tampa, FL

May 2026

Relevant Coursework: AP Calculus BC, AP Physics C Mechanics, AP Physics 1, Engineering Design and Development, Digital Electronics, Aerospace Engineering Fundamentals, Process of Engineering Design, Technical Design, Computer Integrated Manufacturing

SKILLS

Robotic Kinematics, Web Design, Rapid prototyping, Electronics prototyping, Mechanical design, Business management

EXPERIENCE & INVOLVEMENT

USF

Tampa, FL

Head Researcher

May 2024 - Present

- Rapidly prototyped over **10 iterations** for a hydroponic plant growing apparatus in the span of 1 month
- Designed and tested a custom PCB integrating nitrogen, oxygen, and temperature sensors using a Teensy microcontroller, enabling real-time monitoring of plant health with **98%** data accuracy
- Implemented a multi-camera computer vision system tracking root, stem, and canopy growth, achieving fully autonomous environmental adaptation and **24/7** monitoring
- Integrated a dual-reservoir irrigation system maintaining continuous nutrient flow, reducing manual maintenance time by over **80%** and ensuring stable plant hydration

Middleton High School Robotics

Tampa, FL

President

May 2024 – Present

- Revitalized the school's FIRST Robotics Challenge (FRC) program after years of inactivity, leading its return to competition and earning **2 national** awards and 1 award at the **World Championship**, marking the team's most successful season to date
- Managed and mentored **100+** students across FIRST and VEX divisions, increasing competition participation and member retention by **30%**
- Spearheaded mechanical design for Team #3846, developing two FTC robots ranked in the **top 5%** statewide for offensive power rating
- Organized and coordinated 9 teams to participate in **15+** regional competitions, expanding representation across 4 VEX, 4 FTC, and 1 FRC team
- Led **2** FIRST Tech Challenge teams (1369 and 26588) to state qualification, demonstrating technical and organizational leadership

Florida Student Association of Mathematics

Tampa, FL

Region 4a Coordinator & Webmaster

June 2023 – Present

- Developed and maintained the organization's website using HTML, CSS, and JavaScript, migrating all student and competition resources to a fully web-based platform, increasing accessibility and reducing manual communication by **60%**
- Oversaw statewide communications, event scheduling, and competition logistics, streamlining outreach to **400+** students and advisors across Florida
- Served as Regional Coordinator for **80** students in the Tampa Bay area, creating and managing opportunities for participation in elite competitions such as HMMT, PUMaC, ARML, and CMIMC, boosting regional engagement by **50%**

CERTIFICATIONS

Engineering

- RECF Robotics
- RECF Programming
- RECF Electrical
- RECF Fundamentals of Engineering
- RECF Mechanical
- Autodesk Inventor Certified User
- Autodesk AutoCAD Certified User
- Autodesk Fusion 360 Certified User

Software

- IT Specialist - Device Configuration and Management
- LE-1:Linux Essentials
- Microsoft Certified: Azure Fundamentals
- CompTIA IT Fundamentals+ (ITF+) Certification
- IT Specialist - HTML and CSS

Business

- PMI Project Management Ready
- Master Certification in Entrepreneurship
- ESB:Entrepreneurship and Small Business v.2
- Pearson Critical Career Skills Professional Communication