



STUDENT PLANNER

Field Guide for Maya

Grade 11 · 
Class of 2027

SIGNATURE THEME

Every domain you've entered — FRC, VEX, lab automation, teaching — comes back to the same question: **how do you make a system work precisely, at a scale a human can't match alone?** That's not a talking point. It's what you're actually building.

Precision at Scale

BUILT FROM THE
STUDENT'S WORK

A complete, evolving record of direction, choices, and next steps.



VillageEd

CLEAR PATH FORWARD

CONTENTS



Admission Lens

How colleges see you



Your Plan

Your monthly game plan



The Match

Your college list



The Courses

4-year course map



Opportunities

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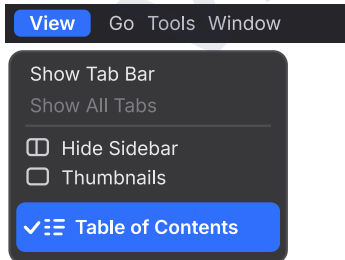
About this document

Disclosures & disclaimers

TIP

Jump anywhere with bookmarks

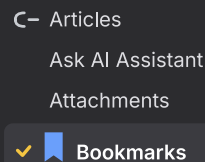
This report has a bookmark outline for quick jumps between sections and tasks. Open your viewer's bookmarks panel — **Adobe:** bookmark ribbon (left) · **Preview:** View ► Table of Contents · **Chrome/Edge:** the outline icon · **Safari:** open in Preview to see bookmarks.



Preview (Mac)

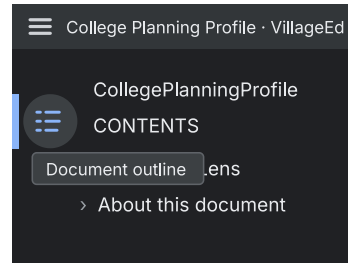
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Adobe Acrobat

Side Panels ► ✓ Bookmarks



Chrome / Edge

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BIGGEST OPPORTUNITY

LEADERSHIP PATH

"Build-Season Lead"

Did you start something, grow into a bigger role, or move others forward?

**BUILDING
MOMENTUM**

SUMMARY

You led FRC's drivetrain sub-team as a sophomore and won a VEX regional as alliance captain — **two real leadership signals in high-pressure competitive settings.**

LEADERSHIP TRAJECTORY

2

Leadership
Signals



Alliance Captain:

VEX Bay Area Signature Event — Tournament Champion as team lead



Appointed Lead:

FRC Drivetrain Lead — designed swerve mounts, ran build schedule, troubleshoot at competition



STRATEGIC ALIGNMENT & COLLEGE INSIGHT



How Admissions Evaluates Your Profile



Technical Leadership Under Pressure: Running a drivetrain sub-team during a 6-week FRC build season — with real competition stakes — is a different kind of leadership than most extracurricular titles.

- ✓ **Teaching as Signal:** Training freshmen on CAD and shop tools, and running library workshops, shows you're bringing others forward — a quality that reads differently than just advancing yourself.

- ✓



Recommendations for Enhancement

Address Soon

1. **Step Up in FRC This Year:** A captain or design lead role junior year — when you have the most institutional knowledge on the team — would be the natural next move and a strong signal for the programs on your list.

2. **Quantify the Sub-team Work:** How many people were on your drivetrain sub-team? What did that sub-system enable at competition? Specific numbers are the difference between 'I led a team' and a leadership story readers remember.

3.

DOCUMENTED EVIDENCE

FRC Drivetrain Sub-team Lead — swerve module mounts, build schedule ownership, competition troubleshooting

APPOINTED

VEX Tournament Champion as alliance captain — Bay Area Signature Event

ROLE HOLDER

VOLUNTEER

VOLUNTEER

Plan Contents

Each **goal** breaks into **action items** with due dates, and each action item into **steps**. Tap a current-semester goal to jump to its detail.

● Summer Before 11th Grade CURRENT

Get your pipetting robot in front of a researcher or engineer this summer >

- Email Berkeley HTSF's [redacted] this week Aug 6, 2026
- Find and email 3 more researchers using Google Scholar Aug 13, 2026
- [redacted]
- [redacted] Aug 10, 2026

Build a public build log for the liquid handling robot >

- Create and configure your GitHub repo today Aug 6, 2026
- Write the project intro and motivation section Aug 10, 2026
- [redacted] Aug 17, 2026
- [redacted] Aug 24, 2026
- [redacted] Aug 31, 2026

Register for the SAT and take it before school starts or in fall >

- Register for your SAT date Aug 7, 2026
- Take one full timed diagnostic test in Bluebook Aug 10, 2026
- [redacted] Aug 12, 2026
- [redacted]
- [redacted]

Visit Johns Hopkins and one other target campus in person >

- [redacted] Aug 15, 2026
- [redacted]
- [redacted]
- [redacted]
- [redacted]

UC Davis Biomedical Engineering Summer Program >

- [redacted]
- [redacted]
- [redacted]
- [redacted]

International Journal of High School Research (IJHSR) >

- [redacted]

GOAL

EXTRACURRICULAR

DETAILS ▾

Get your pipetting robot in front of a researcher or engineer this summer

One conversation with a university lab contact or an Intuitive Surgical engineer about your dispensing accuracy problem moves the project from a personal build to something with external validation — and opens doors that a cold application can't.

GOAL

NARRATIVE

DETAILS ▾

Build a public build log for the liquid handling robot

Create a GitHub repo or a simple Notion/blog documenting your design decisions, the four dispensing head iterations, and your current accuracy data — a concrete artifact admissions readers and research mentors can actually look at.

GOAL

TESTING

DETAILS ▾

Register for the SAT and take it before school starts or in fall

JHU, CMU, and MIT all see high test-submission rates in engineering — one strong attempt this summer or early fall gives you a data point that works in your favor and keeps options open for merit aid at Georgia Tech and the UCs.

GOAL

FAMILY ACTION

DETAILS ▾

Visit Johns Hopkins and one other target campus in person

JHU tracks demonstrated interest — attending an info session or campus tour this summer, and noting specific BME lab or program details you learn there, gives you real material for your 'Why Hopkins' essay and signals genuine intent.

GOAL

EXTRACURRICULAR

DETAILS ▾

UC Davis Biomedical Engineering Summer Program

Interactive workshop for HS students creating 3D anatomical models — tools used by doctors and engineers for surgery planning and medical device design.

GOAL

EXTRACURRICULAR

DETAILS ▾

International Journal of High School Research (IJHSR)

Bimonthly journal publishing HS student research in STEM and social science. Requires identifying 3 professors/post-docs as reviewers.

THIS SEMESTER IN DETAIL

TASK DETAIL

AMPLIFIER

MEDIUM PRIORITY

OPPORTUNITY

Use your FRC connection to get to Intuitive's Fall Open House

Intuitive Surgical runs an annual Fall Open House specifically for Bay Area FRC teams — local grantee teams are invited to Intuitive's Sunnyvale campus for a da Vinci system demo and an engineering panel where students can ask questions directly. Since you're already on an FRC team in Fremont, this is a warm path to Intuitive engineers, not a cold one.



HOW TO DO THIS

1

Ask your FRC team captain or coach whether your team has received an Intuitive Foundation grant or has been invited to previous Intuitive events. If yes, ask them to flag your interest in the Fall Open House when the invite arrives.

2

[Redacted text]

3

[Redacted text]

4

[Redacted text]

Done when: You've confirmed whether your FRC team has Intuitive Foundation ties, and you've set a reminder to check the Foundation's site in September for the open house announcement.

WHY THIS MATTERS

One engineer contact from this event could become the Intuitive connection named in your goal's subtitle — someone who has seen your project and can speak to its relevance in a real engineering context.

Admissions view:

[Redacted text]

[Redacted text]

The Match

10 schools

THE MATCH

VillageEd Match Rank

All 10 schools — tap any to jump to its detail.

#1	JH	Johns Hopkins University Stretch	B.S. Biomedical Engineering — Whiting School of Engineering · Baltimore, MD · Private · ~6,000 undergrad · Semester	>
#2	CM	Carnegie Mellon University Stretch	B.S. Biomedical Engineering — College of Engineering · Pittsburgh, PA · Private · ~7,700 undergrad · Semester	>
#3	UCB	University of California, Berkeley Strong Connection	B.S. Bioengineering — College of Engineering · Berkeley, CA · Public · ~32,000 undergrad · Semester	>
#4	UC	University of California, Los Angeles Strong Connection	Bioengineering — Henry Samueli School of Engineering & Applied Science · Los Angeles, CA · Public · ~32,000 under...	>
#5	GT	Georgia Institute of Technology Building Toward	Biomedical Engineering — Wallace H. Coulter Department of Biomedical Engineering · Atlanta, GA · Public · ~17,000 un...	>
#6				>
#7				>
#8				>
#9				>
#10				>

CM Carnegie Mellon
B.S. Biomedical Engineering — College of Engineering

Admissions Pillars ⓘ



CMU is the only school on your list where the **Robotics Institute, Biomedical Engineering, and Mechanical Engineering** faculty share labs and joint appointments — the exact disciplinary intersection your pipetting project already sits at.

↔ **Medical Devices & Robotics Research Group — CMU BME + Robotics Institute**

CMU's Medical Devices & Robotics research cluster brings together faculty from the Robotics Institute, BME, and ME to develop clinical robotics, rehabilitation systems, and medical devices.



PROGRAM DETAILS

▼ **The Robotics Institute Advantage**

CMU's **Robotics Institute is the oldest and largest university robotics program in the world**, and its 150,000-square-foot Robotics Innovation Center opened in 2025. More importantly for you: undergraduate ME and BME students conduct research directly in RI labs — this isn't a graduate-only resource.

▼ **Test-Flexible for CIT: What This Means for You**

CMU's College of Engineering (where BME and ME live) uses a **test-flexible policy — your AP Physics C and AP Calculus BC scores can stand in for SAT/ACT**.

▼ **Culture: 'Furiously Curious'**

CMU describes its students as **'the furiously curious kind — the deeply driven kind'**. The culture tends toward collaborative intensity rather than cutthroat competition — a meaningful difference from what you described at .

📍 **Campus Fit**

Collaborative vs. competitive culture **STRONG**

Affordability **PARTIAL**

Total COA is approximately \$86,000-\$90,000/year before aid; CMU meets 100% of demonstrated financial need and offers tuition-free attendance for families earning under \$75K — run the net price calculator at cmu.edu/sfs for a personalized estimate.

Undergraduate research access in robotics and BME STRONG

The SURF program and Robotics Institute labs are directly accessible to undergrad ME and BME students — this is the infrastructure you described as a top priority.

READINESS

- ☒ **GPA at or above CMU average (3.89 weighted)**
CDS 2024-2025; Koppelman Group analysis; your 4.4W is at the average
- ☐ **Test credential submitted (SAT/ACT or qualifying AP scores for CIT)**
Test-flexible policy for CIT; AP Physics C and Calc BC scores qualify — confirm at cmu.edu/admission
- ☒ **Demonstrated robotics or engineering project work**
FRC Drivetrain Lead, VEX champion, Onshape Certified Associate, pipetting prototype
- ☐
- ☒
- ☐

VillageEd Report

STRONG COMPETITION unknown

Northern California Science Olympiad

Team-based STEM competition with 23 events in earth science, biology, chemistry, physics, and engineering. Teams advance from regional to state to national.

📍 NorCal State: CSU East Bay, Hayward, CA

Eligibility: HS teams (Division C), grades 9-12

☆ Step Up in FRC This Year

2026 NorCal State was April 4 at CSU East Bay. Season runs ~Sep-May. Check if [] has a team. If not, consider starting one — strong leadership signal.

[🔗 Learn more](#)

GOOD OPPORTUNITY paid (\$200 virtual)

USC Viterbi K-12 Virtual Summer Camps

Virtual engineering camps covering Electronics (high school level) and other topics. 2-week classes, \$200 for virtual.

📍 online

Eligibility: Grades K-12 (varies by camp)

2026 dates: July 6-31. Some sessions may still be open for enrollment.

[🔗 Learn more](#)

GOOD COMPETITION Free

California Science and Engineering Fair (CSEF)

State-level science fair for middle and high school students, feeding into ISEF. Roughly 900 students compete annually across 18 categories. Over \$30,000 in prizes.

📍 California Lutheran University (as of 2026)

Eligibility: Must advance through a regional/county science fair in California

☆ Land the Prototype Somewhere

Requires regional fair qualification. Typically held in spring. Pipetting robot project could be a strong entry.

[🔗 Learn more](#)