

**Bill W.**

**U.S. Collenge**

**UNDERGRADUATE  
APPLICATION PLAN**

College Entry Term: Fall 2028

Drafted: Dec. 5, 2025



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## 1 | Student Profile

**Name:** Bill W.

**Current grade:** Rising 10th

**GPA:** 4.0 (top 5% of the class)

**Target School(s):** Georgia Tech (GT – Computer Science/Engineering)

**Proposed Major:** Robotics + Artificial Intelligence

### Strengths

- Outstanding in mathematics (participated in AMC10)
- Strong interest in Robotics/AI
- The target major is highly aligned with future career trends

### Weaknesses

- No strong spike is formed
- Insufficient activity depth (lack of a 2–3 year continuous storyline)
- Leadership/Community is weak

## 2 | Student Persona (to be built)

### Profile

- Bill is a highly intelligent, tech-driven, and caring student who excels academically and demonstrates genuine passion for CS, AI, and Robotics—while actively developing leadership through teaching and helping others.

### ★ 1. Core Characteristics

#### ✓ Highly Intelligent & Strong Academic Performer

Bill is a very smart, fast-learning student with excellent academic performance.

He demonstrates strong quantitative ability, logical thinking, and high learning efficiency—especially in math, physics, and computer science, which makes him naturally aligned with engineering and AI-related majors.

### ★ 2. Motivations & Interests

#### ✓ Deep Interest in CS, AI, and Robotics

Bill is genuinely passionate about technology.

He actively explores:

- Computer Science
- Artificial Intelligence / Machine Learning
- Robotics engineering
- Programming competitions (USACO)

He is not pursuing these because “they look good for college”—he is truly curious, self-driven, and enjoys building and understanding how technology works.

This authentic passion is one of his strongest competitive advantages in the U.S. college admissions process.

### ★ 3. Activities & Behavior Patterns

#### ✓ Actively Participates in Competitions & Engineering Activities

Bill consistently seeks out opportunities to challenge himself and build real technical ability, including:

- USACO programming competition
- STEM / Robotics activities
- AI or engineering-related personal projects

He is not afraid to try difficult things, and he enjoys solving real problems through technology.

#### ★ 4. Leadership & Social Qualities

##### ✓ Enjoys Sharing Knowledge; Willing to Help Others

Bill has a strong willingness to contribute to others.

He volunteers as a "Student Instructor" and enjoys teaching math to younger students.

This demonstrates:

- Communication ability
- Patience
- Responsibility
- Early-stage leadership potential

These traits will later become strong parts of his application Leadership & Impact dimension.

#### ★ 5. Implications for College Applications

Bill's persona indicates a student who is:

- Academically strong
- Technically talented
- Passion-driven
- Community-minded
- A natural fit for CS / AI / Robotics / Engineering majors

His combination of intelligence + curiosity + leadership potential is exactly what top engineering schools (GT, UIUC, CMU, Purdue) look for.

#### ★ One-sentence Summary

Bill is a highly intelligent, tech-driven, and caring student who excels academically and demonstrates genuine passion for CS, AI, and Robotics—while actively developing leadership through teaching and helping others.

# 4 | CEP Evaluation Summary

Name:   
 Phone:   
 Grade:   
 Date:

## College Early Planning Student Information Form



**Academics**  
YOUR INTELLIGENCE

↓

**Activities**  
YOUR LEADERSHIP

↓

**Competitions**  
YOUR STRENGTH

↓

**Dedication**  
YOUR PASSION

↓

**Targets**  
BEST FITTING

↓

**Show-up**  
YOUR STORY

↓

**Extra**

**GPA (High School)**  (4.0 scale)  (Weighted) **Class Rank**

**Course Rigid Level**  All advanced classes  Mix of regular and advanced  Regular classes

**SAT**  (Composite score)  (Reading)  (Math)

**PSAT**  (Composite score)  (Reading)  (Math)

**ACT**  (Composite)  Math  Science  STEM  English  Reading  Writing

**AP Tests (Taken & To be taken)**

None

---

*Holistic Evaluation*

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**School & Extracurricular Activities**

- Tier
- Tier
- Tier
- Tier
- Tier

---

**Competition & Achievement**

- Level
- Level
- 

---

**Demonstrated Interest**

- 

---

**College & Program**

GT  (Reach)  (Good)  NA

---

**Narrative**

Personal Essay

Writing Supplements

Interview

Linkedin

Recommendations

Video

Social Media

● Well-Rounded

● A Big Spike

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**X-Factor**  Extra consideration factors: geography, legacy, recruited athletes, under-represented minorities, first-generation college students, Pell-eligible etc.

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Name: Bill\*\*\*  
 Phone: 185\*\*\*  
 Grade: 10  
 Date:

# College Early Planning Student Evaluation Score



Self Evaluation NA  
 Parent Evaluation NA

**Holistic Evaluation**

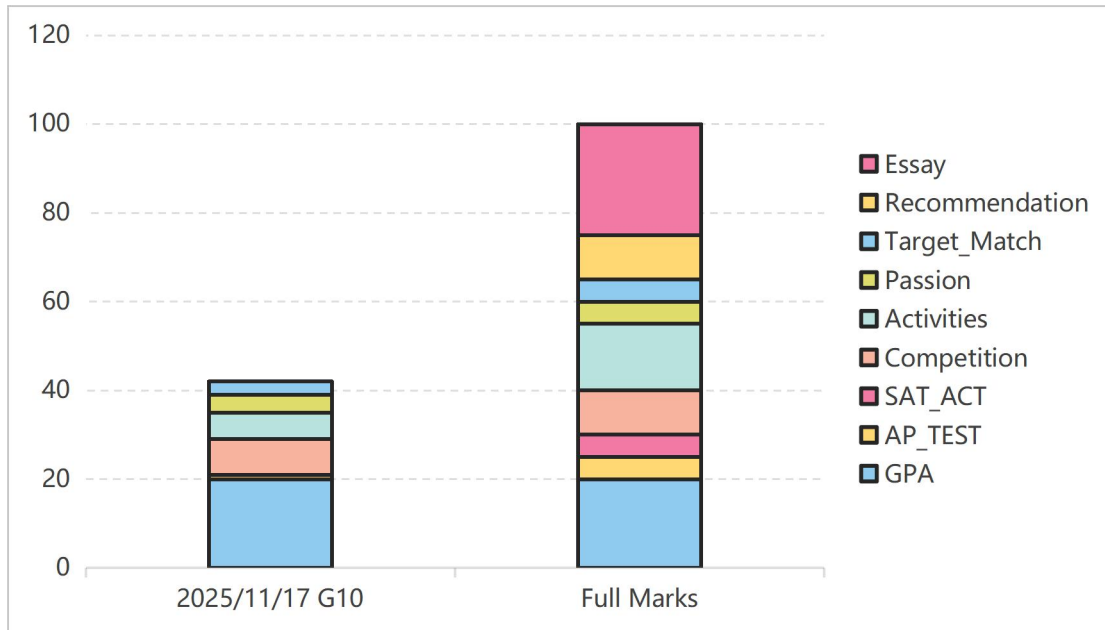
<b>Academics</b> SHOW YOUR INTELLIGENCE ↓	<b>GPA/Class Rank, Standard Test, AP Class</b> 20 + 5 + 5 = 30 Bill's GPA is a perfect 4.0, placing him in the top 5% of his class. However, he has not yet taken standardized tests such as the SAT or ACT, resulting in a score of 0 for Test Scores. He has not taken any AP tests, scoring 1 in this category.	[20] [0] [1]
<b>Activities</b> SHOW YOUR LEADERSHIP ↓	<b>Activities: Quantity/Time, Position, Impact</b> 5 + 5 + 5 = 15 Bill has participated in two school activities related to computers and robotics. While he engages in these activities, there is no evidence of leadership or awards, leading to a score of 0 for Position. However, the activities do have a notable impact level given their national and regional acclaim.	[3] [0] [3]
<b>Competitions</b> SHOW YOUR STRENGTH ↓	<b>Competition Quality</b> 10 Bill scored in the top 1% in the AMC 8 competition, indicating a strong performance at the national level. He also participated in the AMC 10, giving him a score of 8 for notable competition participation.	[8]
<b>Dedication</b> SHOW YOUR PASSION ↓	<b>Interest Match Achievement</b> 5 Bill shows a consistent interest in robotics and coding through school activities. While he has not achieved awards, his engagement indicates a moderate level of passion.	[4]
<b>Targets</b> BEST FITTING SCHOOL ↓	<b>College/Program Match Competitiveness</b> 5 Bill's targeted college (GT) is a competitive institution, but we lack specific data on historical admission rates for his demographic, leading to a neutral score.	[3]
<b>Show-up</b> TELL YOUR STORY ↓	<b>Essay, Supplements &amp; Recommendations</b> 15 + 10 + 10 = 35 Bill has not provided any information on his essays, leading to a score of 0. There is no information about recommendations, so this also scores 0.	[0] [0] [0]
<b>Extra</b>	<b>X-Factor</b> 10     Bill's overall profile lacks any significant X-Factor that might enhance his application, such as major competitions or unique	[0]

Bill demonstrates strong academic performance and some competition achievements. However, he is lacking in standardized test scores, a breadth of extracurricular involvement, and impactful essays. This may make his college applications competitive but needs improvement in several areas.

Signature AI Teacher

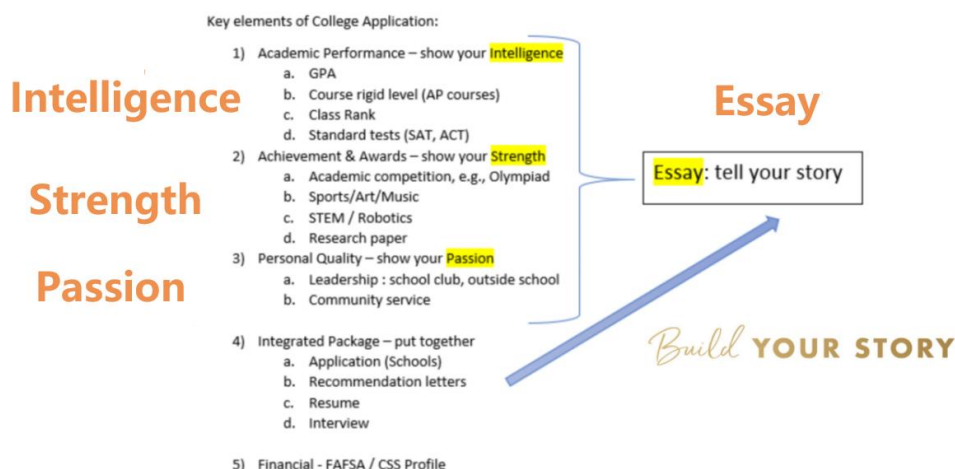
Date 2025/12/03  
 mm/dd/yyyy

### Holistic Review Diagram



	2025/11/17 G10	Full Marks
<b>GPA</b>	20	20
<b>AP_TEST</b>	1	5
<b>SAT_ACT</b>	0	5
<b>Competition</b>	8	10
<b>Activities</b>	6	15
<b>Passion</b>	4	5
<b>Target Match</b>	3	5
<b>Recommendation</b>	0	10
<b>Essay</b>	0	25
<b>X-Factor *</b>	0	10
<b>Total</b>	<b>42</b>	<b>110</b>

## 'Holistic' Admission Process



## CEP Six-Dimensional Assessment Criteria

### ① Academic (academic foundation)

Assess students' learning capacity and foundational performance. Key metrics include: GPA, subject performance (STEM/English), and long-term stability.

**Score focus:** Whether it meets the basic academic threshold of the target school.

### ② Rigor (course challenge level)

Assess whether students have taken courses of sufficient difficulty. This includes: the number of AP/IB/A-Level courses, Honors courses, and challenging pathways in Mathematics/Science (e.g., Calc BC, Physics C).

**Score Focus:** Does the course demonstrate "daring to challenge + capability"?

### ③ Activities (Activity Depth)

Evaluates the depth, continuity, and central focus of the student's extracurricular activities. This includes the duration of participation, measurable outcomes or impact, and whether the student has developed a clear spike (area of specialization).

**Scoring focus:** Not the quantity of activities, but whether the student has gone deep.

### ④ Interest (academic interest)

Assess students' genuine interest in their target major and evidence chain. This includes: projects, competitions, research, exploration records (e.g., engineering, AI, writing), and whether their future career direction is clear.

**Score Focus:** Is the interest "genuine, profound, and actionable"?

### ⑤ Leadership (Leadership and Responsibility)

Assess students' roles, responsibilities, and leadership capabilities within the group. This includes: club positions, teaching/volunteer class supervision (e.g., Little Teachers), team

organization, and project promotion.

**Score Focus:** Have you been a "driving force"?

⑥ **Narrative (personal story expression)**

To assess whether students can present a unique, coherent, and credible narrative through their essays and actions. This includes: the thread of the Personal Statement, logical flow of supplementary essays, personal values, motivations, and growth.

**Score Focus:** Who are you? Why are you worthy of admission?

**Bill's CEP Radar Chart (Six-Dimensional Radar Chart)**



## Bill Status

### 1. Academic

- With a GPA of 4.0 and consistently ranking in the top 5% of the class, this demonstrates strong academic foundation and excellent execution skills.
- Mathematics: Pursuing an advanced mathematics track with proficiency in higher-level courses (AP Calc BC, competitions).

### 2. Activities & Awards

- I've already been in touch with the Robotics team, AMC10, and USACO, which means I got off to a head start compared to my peers.
- The current issue is that the projects are fragmented, the outcomes lack prominence, and there is no representative work worthy of a full-length document.

### 3. Passion & Character

- The genuine interest in engineering, robotics, and AI is authentic, not a fabricated direction for temporary applications.
- He has the persistence and the willingness to study, but he needs more training in expression, self-summarization and leading others.

### 4. Overall Score (Package)

- If you apply now, your overall competitiveness would be: 'Academically sound with a clear direction, but lacking standout strengths and sufficient leadership evidence.'
- This is why we emphasize building a 'Robotics + AI + Leadership' Spike within two years.

## (1) Academic Performance – Show Your Intelligence

(Academic strength | Reflecting students' academic foundation and challenge ability)

Subcategory	Bill's current status	Impact on the application	Future improvement strategy
<b>GPA</b>	Bill's core strengths lie in his academic excellence, particularly in mathematics and science.	Engineering majors are highly valued, with high GPA being a strong plus.	Maintain high grades and avoid falling behind in courses
<b>AP / Honors</b>	APs are insufficient, and core engineering courses (Calc BC/Physics C) are lacking.	Top engineering schools attach great importance to it, which is currently a weak point	Required courses: AP Calc BC, AP Physics C, AP CS A.
<b>Class Rank</b>	The ranking is expected to be good, but it should be related to the course difficulty.	High ranking + high difficulty of courses → true competitiveness	Select difficult courses to enhance real competitiveness
<b>SAT / ACT</b>	System preparation is not yet complete, but the math section has great potential	Engineering programs require a high SAT score (1500+)	Focus on the Reading section

## (2) Achievements & Awards – Show Your Strength

(Achievements and Results | Demonstrating Students' Academic Depth and Practical Skills)

Subcategory	Bill's current status	Impact on the application	Future improvement strategy
<b>Academic Competition (AMC / USACO)</b>	AMC 10 has been passed; USACO has the foundation to aim for Silver→Gold	Engineering departments in top-tier universities place high value on competition achievements	Target: USACO Silver→Gold; AMC12→AIME
<b>Awards (Competition/Project Results)</b>	The current achievements are not outstanding enough	Engineering Strong University Judging "Can You Do It" by Results	Strive for concrete achievements through competitions and engineering projects
<b>STEM / Robotics</b>	Has genuine interest in Robotics/AI but lacks long-term projects	Engineering Major Focus on "Work / Project Depth"	Continue working on 1-2 projects → Autonomous vehicles/Visual recognition/mechanical arms
<b>Research / Engineering Projects</b>	Lack of clear project outcomes	Project Results=Core Competitiveness of Engineering Application	Create 1–2 demonstrable engineering projects (GitHub/Video)

### (3) Personal Quality – Show Your Passion

(Personal traits | Show the students' passion, leadership, and growth potential)

Subcategory	Bill's current status	Impact on the application	Future improvement strategy
<b>Leadership</b>	The weakest links are mostly participant roles	Top-tier universities highly value leadership	Through the AiGoLearning Little Teacher Program, we build a complete leadership pathway: Teaching Assistant → Lecturer → Team Leader
<b>Community Service</b>	Ordinary volunteers lack the integration of "engineering × service"	Combining with professional orientation can significantly enhance the score.	Volunteer in STEM: Teaching coding and robotics to younger students
<b>Passion</b>	Interest in AI/Robotics is genuine, but lacks consistent proof	Why Major is the primary source of material	Transforming Interest into Action through Projects, Competitions and Summer Schools
<b>Character</b>	Responsible and focused, but the story is not complete	Growth and reflection need to be reflected in the document	Record project processes, failure experiences, and team leadership experiences

### (4) Integrated Package – Put Everything Together

(Overall application packaging | Key part determining whether the application is "established")

Subcategory	Bill's current status	Impact on the application	Future improvement strategy
<b>Application</b>	Engineering orientation is clear, but materials are not systematic	Application logic must be "consistent and persuasive"	Building a complete narrative chain around Robotics + AI
<b>Recommendation Letters</b>	No strong recommender	Recommendation Letter Can Strengthen Leadership / Academic	Math/Physics Teacher + Engineering Mentor + Junior Teacher Project Mentor
<b>Resume</b>	Lack of project and outcome support	Resume determines the first impression of AO on students	Add engineering works, competition results, and teaching experience
<b>Essay</b>	The materials are scattered and lack a main narrative thread.	Essay is the most valued storytelling ability in American universities	Mainline: Engineering → Robotics → Teaching → Leadership Growth
<b>Interview</b>	Personality suits "technical interview", but requires training in expression	Engineering interviews typically focus on project specifics and problem-solving skills.	Use projects as the main thread to train your ability to explain your project

## CEP Comprehensive Analysis Summary

<b>Class</b>	<b>Bill's current situation</b>	<b>competitiveness evaluation</b>	<b>Focus for the next two years</b>
<b>Intelligence</b>	Strong GPA, weak Rigor	Strong academic potential	AP + Standardized Testing Enhancement
<b>Strength</b>	Dispersed activities, lack of results	moderately competitive	Competitions + Engineering Project Achievements
<b>Passion</b>	Authentic interest, weak leadership	potential but no evidence	Little Teacher Plan + Robotics Leadership
<b>Package</b>	Story chain is incomplete	Lack of persuasiveness	Constructing Engineering Spike Document System

Bill is a student with strong academic potential and clear interests, aiming to build a 'Robotics + AI + Leadership' Spike through a two-year program.

## 2. | JobAnalyze Career Path / AI & Robotics Career Path

### AI & Robotics Typical Career Path (Based on JobAnalyze Data)

Direction	Job Title	Core Skills	Trend
<b>Robotics</b>	Robotics Engineer	C++/Python, ROS, SLAM, Mechanical Design	Robot automation is growing rapidly (manufacturing/logistics/autonomous driving)
<b>AI Engineering</b>	AI Engineer	Python, TensorFlow/PyTorch, Model Deployment	AI engineering positions are expected to maintain rapid growth
<b>Machine Learning</b>	Machine Learning Engineer	ML/DL algorithms, data processing, mathematics	High-paying and highly competitive position
<b>Computer Vision</b>	Computer Vision Engineer	OpenCV, deep learning, image recognition	High demand for autonomous driving, security, and manufacturing
<b>Research / Innovation</b>	Research Engineer	Algorithm Innovation, Experimental Design, and Paper Writing Skills	Suitable for research-oriented students

#### Reasons why it suits Bill:

- Strong mathematical foundation → Fundamentals of ML/control algorithms
- Robotics Interest → ECE/MechE/CS Integration
- All target schools have strong engineering colleges

#### Enter the career path query:

Click the link below to view the complete career path analysis for AI & Robotics

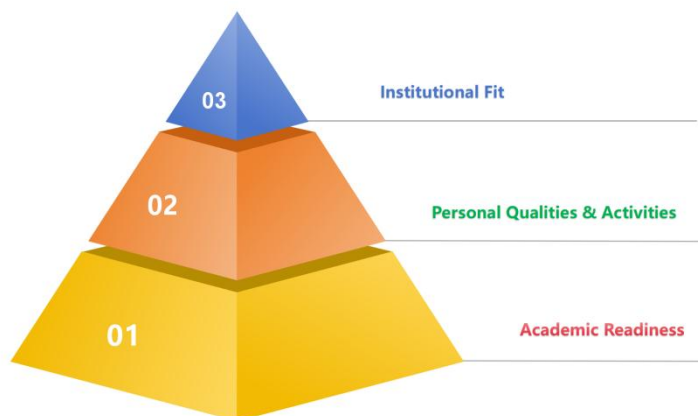
<https://alumni.aigolearning.org/jobanalyze>

### 3. | Target Schools and Application Requirements

School	Major Focus	Difficulty	US News Ranking *
<b>Carnegie Mellon University (CMU)</b>	Robotics / CS / AI	★★★★★ Reach	<b>#20</b> #2 CS / #4 Engineering
<b>Georgia Tech (GT)</b>	CS / Robotics / ECE	★★★★★ Reach	<b>#32</b> #5 Engineering / #6 Public University
<b>UIUC</b>	CS / ECE / AI	★★★★☆ High Match	<b>#36</b> #9 Engineering / #5 CS (AI Special Higher)
<b>UW-Madison</b>	CS / Engineering	★★★★☆ Match	<b>#46</b> #14 Public University
<b>Purdue University</b>	Engineering / CS / Robotics	★★★★☆ Match	<b>#46</b> #8 Engineering (Undergrad)

\* <https://www.usnews.com/best-colleges>

## U.S. College Admissions: 3-Part Review



Successful Admission = Academic Strength × Personal Depth × School Fit

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### Admissions Officer Evaluation Sequence

#### 1. Academic Readiness

Used as an initial screening stage.

Applicants who do not meet the academic baseline are eliminated early from further review.

#### 2. Personal Qualities

Evaluates whether the applicant is worth deeper discussion.

At this stage, essays, recommendation letters, and extracurricular activities are reviewed together as a whole, rather than in isolation.

#### 3. Institutional Fit

This is the final decision stage.

The key question becomes: “Within this year’s incoming class composition, are you the missing piece?”

## 5.1 CMU – Carnegie Mellon University (SCS / Robotics Institute)

**Difficulty:** Reach (Very Hard)

**GPA:** 4.0+

**SAT:** 1530–1560

**AP:** 8–12

**Admission rate:** ≈ 11% (lower for Robotics)

### Required Coursework

- AP Calculus BC (required and high score)
- AP Physics C: Mechanics & E/M (Mandatory)
- AP Computer Science A
- AP Statistics

### Activity Preferences

- Robotics (FRC/FTC/VEX) ≥ 2 years
- AI/ML Engineering Project (Show Code)
- USACO Silver–Gold
- AMC10 → AMC12 → AIME

### Document requirements: Essays

- Why CMU Needs to Reflect Technical Depth + Academic Motivation
- Emphasize problem-solving
- The growth chain in Robotics/AI

### Fit Analysis

- Bill's strong foundation in both mathematics and programming is a perfect match, but: **You must have outstanding performance in international competitions!**
- Display AP rigidity and Robotics depth

## 5.2 Georgia Tech (GT – Engineering / CS)

**Difficulty:** Reach

**GPA:** 4.0+

**SAT:** 1480–1550

**Admission rate:** ≈ 17%

GT emphasizes Engineering Motivation and Long-term STEM Path

### Course requirements

- AP Calc BC
- AP Physics C
- AP CS A

### Activity Preferences

- Robotics (Programming / Controls)
- USACO ≥ Silver
- AIME
- GT Engineering Summer

### Fit analysis

- You must have excellent performance in international competitions!
  - Demonstrate strong alignment with engineering/computer science disciplines It is necessary to strengthen the differentiated competitiveness

### Admission trend:

- **Admission data changes**
  - International student admission rate: 9% (overall admission rate: 12.7%)
- **Core Influencing Factors**
  - Policy tightening: State policies reduce international student quotas, leading to decreased allocations
  - Elevated admission criteria: Higher standardized test scores
  - Greater emphasis on professional alignment and research experience (robotics/academic competition participation)
- **Academic Competition Landscape-Flagship Program Performance:**
  - Engineering: Biomedical/Environmental/Industrial Engineering ranks first in the United States, but application volume declines
  - Computer Science: The second-tier leader, requiring direct application to the Computer Science program (other majors may be admitted without specific major requirements)
  - Special Phenomenon: Application for Computer Science and Mathematics Major Increase Against the Trend

## 5.3 UIUC – University of Illinois Urbana-Champaign (Engineering)

**Degree of difficulty:** Match

**GPA:** 3.9+

**SAT:** 1450–1520

**Admission rate:** ≈ 23%

### Required

- AP Calc BC
- AP Physics C
- AP CS A

### School preference

- Engineering Project / Robotics
- High Rigor (6–8 APs)

## 5.4 Purdue University (Engineering)

**Degree of difficulty :** Match

Engineering-focused universities tend to admit students with engineering interests and maintain consistent activity participation.

### Required

- Calc BC
- Physics C

### Preference

- Robotics Experience (Years)
- Engineering hands-on skills

## 5.5 Penn State University (PSU – Engineering)

**Difficulty:** Safety

Admissions are stable, with emphasis on activity participation and GPA.

### Preferred direction:

- Robotics
- project item
- STEM activity continuity

## 4. | Application Preparation

### Time Line :

- Now: G10 (2025–2026)
- G11: 2026–2027
- G12 Application Season: Fall 2027 → Fall 2028

### The overall objective can be summarized in one sentence:

Academically, focus on top-tier achievements → deepen expertise through competitions and engineering projects Robotics + AI → enhance through mentorship programs and team roles  
Leadership & Impact → articulate this core theme in your application essays.

## ① Academic Performance – Show Your Intelligence

(Academic Strength: GPA | AP | Difficulty | Standardized Tests)

### (1) GPA (Grade Point Average)

Objective: Maintain a GPA of 4.0 (A range). Bill's strong GPA is an advantage and should be sustained.

- Maintain all A grades in STEM core subjects every semester
- Conduct weekly reviews (homework checks, exam reviews)
- If there is any instability, promptly consult a teaching assistant or tutor for supplementation.

### (2) AP/Honors (Challenge Rigor)

Enhance the CEP Rigor 2/5

#### 11th Grade:

- AP Physics C Mechanics
- AP Computer Science A
- Honors English or AP English (Enhanced Narration)

#### 12th Grade:

- AP Physics C E&M
- AP Statistics

- AP CS Principles / AP Research (if offered by the school)

### **Why is it important?**

CMU, GT, and UIUC place strong emphasis on the 'mathematics-physics-CS trio' for engineering admissions, while also evaluating the academic challenge of the curriculum.

### **(3) AP Exams (Advanced Placement exams)**

AP scores serve as a further validation of academic rigor. The goal is to achieve 6-8 AP scores by the end of 11th grade and 3-4 AP scores by the end of 12th grade. Strive for an AP score of 5 (with a minimum of 4).

- proof of engineering capability
- Why Major
- Resume Project Reinforcement

### **(4) TOEFL**

Applicants to the CMU/GT/UC series must demonstrate competitive TOEFL scores.

- objective : 100–110+

To improve your English, focus on reading! Practice listening by speaking with native speakers.

- Weekly Reading

### **(5) SAT/ACT (Standardized Testing)**

Target: SAT 1500+ (Math 780+)

Bill has a clear advantage in mathematics, with Reading being the key area for improvement.

Planning rhythm:

- Summer 10th-11th: SAT prep. If the mock exams meet the target, take the first SAT at the end of summer (aim for 1450+).
- Summer break (11th-12th): Second SAT attempt (aiming for 1500+ points)

## ② Achievements & Awards – Show Your Strength

(Results and Highlights: Competitions | Projects | Engineering Works)

### (1) Academic Competitions (USACO / AMC / AIME)

AMC (Core Competition): AIME is a standout program with exceptional engineering focus (particularly at CMU/GT/UIUC)

- AMC10 has participated (results pending)
- AMC 12 → Enter AIME

USACO (Core Competition)

Target path:

- 10th → Bronze → Silver
- 11th → Silver → Gold
- Gold (sufficient for an essay)

### (2) Engineering/ Robotics Projects

The true engineering excellence lies in the tangible results.

Recommended 2-year project route:

#### 10th: Engineering Foundation

- Carpathway / PID parameter tuning
- Introduction to Arduino / Raspberry Pi
- OpenCV preliminary visual recognition

#### 11th: Advanced Project

- Autonomous Navigation Vehicle (SLAM Principle)
- robot arm automatic grasping
- AI Vision Classification (TensorFlow Lite)

#### Summer 11th-12th: Capstone Project

- Write documents, record videos, and upload to GitHub:
- For example: "A vision-driven robotic arm for object sorting"
- Sorting robotic arm based on visual recognition

### (3) Awards (Competition Results)

Awards can come from:

- Engineering fairs
- Science competitions
- Robotics team competitions
- Hackathon (FutureHacks)

Objective: At least 1-2 demonstrable engineering achievements.

### ③ Personal Quality – Show Your Passion

(Personal Traits: Passion, Leadership, Service, Character)

#### (1) Leadership (Weakness → Focus on improvement)

Bill CEP Leadership 1/5 remains the weakest link. Key development focus areas:

##### A. AiGoLearning Little Teacher Program (Required)

- 10th: Teaching Assistant (TA)
- 11th: Independent zone with 1–2 small classes
- 12th: Become a team leader / project lead
- Cumulative volunteer hours  $\geq 100$  hours

##### B. Robotics Team Leadership

- Become a Programming Lead / Mechanical Lead
- Guiding freshmen
- Responsible for a full season project
- Leadership is not a title, but "you lead others to success".

#### (2) Community Service (meaningful service)

STEM Outreach (Strongest Form) -Combined with Professional Direction:

- Teaching Math / Robotics to Lower Grades
- Be a mentor for the school's robotics club
- Organize a children's engineering workshop

This service demonstrates:

Impact  $\times$  Leadership  $\times$  Passion – a three-in-one combination.

#### (3) Passion (Depth of Interest)

Bill has a strong interest, if it can be done:

- The project lasts for three years
- Weekly Learning Log
- Achievements of the Competition
- Teach others

He could convince the admissions officer in Why Major that he was truly a 'Robotics + AI kid'.

#### **(4) Character (Personality)**

Available through supplementary documents:

- problem-solving
- resilience
- humility
- responsibility

### **④ Integrated Package – Put Everything Together**

(Apply for a complete package: Application documents | Recommendation letters | Activity list | Why School)

#### **(1) Personal Narrative (Document Story Chain)**

Bill's main thread:

**Engineering → Robotics → AI → Teaching → Leadership**

(Interest → Skill → Project → Teaching Others → Influence)

The document system includes:

#### **Main Document (3 Story Chains)**

- ① Project failed → debug → growth
- ② Teaching → Leadership → Responsibility
- ③ Math → AI → Robotics → Future

#### **Supplementary Documents (2 Topics)**

- ① Character (Flexibility, Self-discipline, Perseverance)
- ② Impact (the moment of changing others through teaching)

## (2) Recommendation Letters

optimal portfolio :

1. Math/Physics Teacher (Intelligence)
2. Engineering/Robotics Advisor (Strength)
3. Cultural Mentor
4. AiGoLearning Teaching Mentor (Leadership + Impact)

## (3) Resume (Activity Resume)

- Project (Engineering Achievement)
- contest
- Leadership
- STEM Teaching
- Skills (Python / C++ / ROS / OpenCV / ML Basics)

## (4) Activities List

The first 3-4 activities must be integrated around Bill's main thread:

**“Robotics + AI + Engineering + Leadership + Teaching”**

## (5) Why Major / Why School

Organized by school focus areas:

- CMU: Project Depth + Engineering Culture
- GT: Academic rigor + Laboratory
- UIUC: AI/Robotics Research Opportunities
- UW-Madison: Engineering Community Culture
- Purdue: Engineering Practice + CO-OP

## 5. | Document Story Chain: Personal Narrative

### ★ Storyline 1 — "The Journey of Engineering Starting from a Mistake"

(Engineering Thinking + Problem Solving + Persistence + Self-Reflection)

**The theme:** A failed robotics project → Fostering engineering interest → Forming a growth turning point

**Story Structure:** Document Focus: Growth, Resilience, Learning Attitude

What admissions officers see: Authenticity; STEM Mindset; Persistence; Intellectual curiosity

### ★ Storyline 2 — "Teaching others makes me a better version of myself"

(Leadership Growth + Little Teacher Program + Responsibility)

**Topic:** Becoming a Little Teacher at AiGoLearning: From Shy to Leading a Team

**Story Structure:** Document Focus: Leadership Growth / Responsibility / Communication

**What admissions officers see:** Leadership (the most in-demand dimension); Teamwork; Communication; Community impact; Growth

### ★ Storyline 3 — "Mathematics helps me understand the world, and engineering enables me to change it"

(Academic Interest Chain + AI/Robotics Strong Narration)

**Theme:** The Motivational Chain from Mathematical Thinking to AI Logic and Robotics

**Story structure:**

① His earliest passion was mathematics, where he relished the thrill of 'breaking down complex problems'.

② While watching an autonomous driving demonstration, I suddenly realized how mathematics can be transformed into 'real-world actions'.

③ Start learning Python, OpenCV, and basic ML

- ④ A Simple Prototype of Visual Recognition Robot
- ⑤ From "Understanding the World" to "Changing the World"
- ⑥ Document Location: Why AI / Why Robotics / Why Engineering

### What admissions officers see:

- Clear intellectual trajectory
- Strong academic alignment
- Self-driven learning
- A credible Robotics & AI applicant

### ★ Supplementary Essay 1 – Character (Personality Traits)

Topic: "I am the kind of person who doesn't stop until it works."

(Reflecting Bill's problem-solving skills, humility, and sense of responsibility)

#### Writeable direction:

- The Characteristics of "N Failures but Not Giving Up" in Engineering Projects  
Debugging robots, code fixes, and repeated testing
- The process teaches patience, responsibility, and how to face uncertainty.
- **Personal keywords: persistent / patient / accountable / curious**

### ★ Supplementary Essay 2 – Impact (Social Influence)

Topic: "Teaching robotics to younger students changed how I see impact."

(From personal growth → community contribution → the significance of engineering education)

#### Writeable direction:

- The AiGoLearning Little Teacher Program helps younger students learn coding
- I initially thought 'impact' meant 'achieving great things,' but later realized that 'helping a student understand for-loops is impact.'
- The students who were taken out completed their own mini-game for the first time.
- Understanding how STEM education impacts others
- Impact = teaching + mentorship + engineering for others

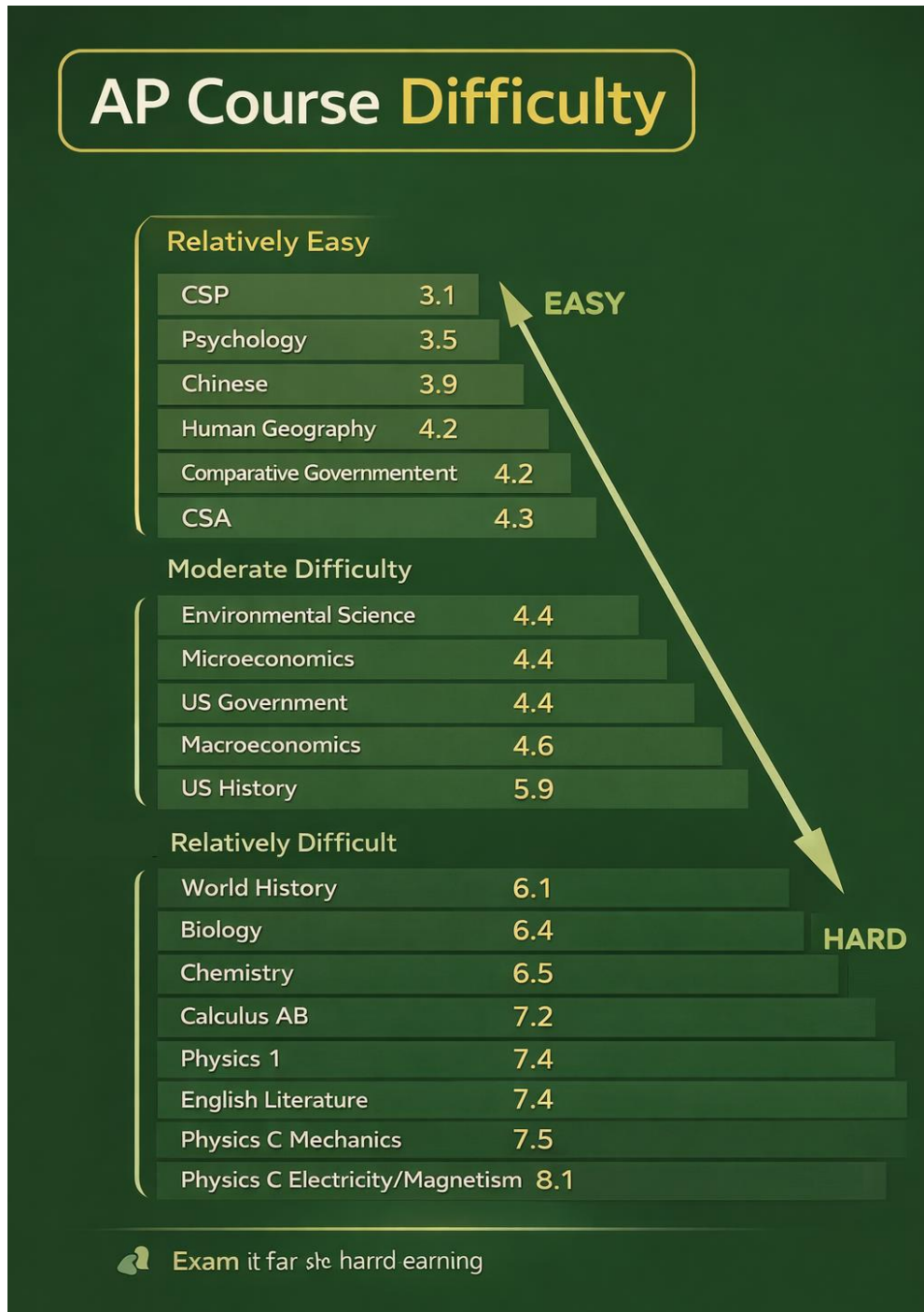
## 6. | Time Planning (Monthly) / Monthly Timeline

Grade 10 (Now–Summer 2026): Build a solid foundation and choose a main storyline		
Overall planning objective	<p><b>Academic:</b> Maintain a GPA of 4.0, take 1–2 AP courses as needed, and adapt to the AP learning pace.</p> <p><b>activity :</b></p> <ul style="list-style-type: none"> <li>➤ Officially join the Robotics team and participate in a full season;</li> <li>➤ Join AMC10 to begin your USACO Bronze competition journey.</li> </ul> <p><b>Project:</b> Undertake 1-2 small engineering/AI projects to identify Bill's true passion and areas he's willing to 'tinker with repeatedly'.</p> <p><b>Leadership:</b> Begin as a junior teaching assistant, first stepping into the 'frontline' to adapt to explaining and guiding children.</p>	
Time	Item	Remarks
September–December 2025	<ul style="list-style-type: none"> <li>➤ Join the Robotics team</li> <li>➤ AMC10 Competition</li> <li>➤ USACO Learning</li> </ul>	The school maintains the 10th grade curriculum at A level.
January–March 2026	<ul style="list-style-type: none"> <li>➤ Robotics Team Project</li> <li>➤ AIME I Competition</li> <li>➤ USACO Bronze</li> <li>➤ Teacher Plan Starts</li> <li>➤ AI/Engineering Project Starts</li> </ul>	Little Teacher Program Starting in 2026 and continuing until application
April–June	<ul style="list-style-type: none"> <li>➤ AP Exam</li> </ul>	AP exam score: 5

<p><b>Summer (July-August)</b></p>	<ul style="list-style-type: none"> <li>➤ Tofel</li> <li>➤ SAT #1 (Check your preparation status)</li> <li>➤ USACO Learning</li> <li>➤ AI/Engineering Project</li> <li>➤ Summer School (Optional)</li> </ul>	<p><b>Summer midterm exams and Create AI/Engineering Projects</b></p>
<p><b>Grade 11 (2026–2027): Deepen the main theme and achieve tangible results</b></p>		
<p><b>Overall planning objective</b></p>	<p><b>Academic:</b> Take core AP courses (e.g., Physics C, CS A), aiming for a score of 4-5.</p> <p><b>Competitions:</b> Aim for AIME, USACO Silver, or even Gold (depending on your progress).</p> <p><b>Project:</b> Complete one engineering + AI project that can be included in the application materials, with code, report, and video.</p> <p><b>Leadership:</b> Lead class teaching sessions, accumulate volunteer hours, and aim to secure opportunities to 'take charge of a project' in both the Little Teacher System and Robotics programs.</p>	
<p><b>September–December</b></p>	<ul style="list-style-type: none"> <li>➤ Robotics Competition Season</li> <li>➤ School Leadership Promotion</li> <li>➤ AMC12 Competition</li> <li>➤ USACO Silver</li> </ul>	<p><b>The school maintains Grade 11 curriculum at A level.</b></p>
<p><b>January–March 2027</b></p>	<ul style="list-style-type: none"> <li>➤ Robotics Team Project</li> <li>➤ AIME II Competition</li> <li>➤ USACO Gold</li> <li>➤ Junior Teacher Promotion Plan</li> </ul>	<p><b>The Little Teacher Program will continue until 2027</b></p>
<p><b>April–June</b></p>	<ul style="list-style-type: none"> <li>➤ AP Exam</li> </ul>	<p><b>AP exam score: 5</b></p>

<p><b>Summer (July-August)</b></p>	<ul style="list-style-type: none"> <li>➤ Tofel (Check the results of Exam #1)</li> <li>➤ SAT #2 (depending on the results of #1)</li> <li>➤ USACO study (based on exam performance)</li> <li>➤ AI Project Depth → Portfolio Completed</li> <li>➤ Summer School (Optional)</li> <li>➤ Draft of the document story</li> </ul>	<p><b>Summer midterm exams and Create AI/Engineering Projects</b></p>
<p><b>Grade 12 (2027–2028): Finalization and Application</b></p>		
<p><b>Overall planning objective</b></p>	<ul style="list-style-type: none"> <li>➤ Maintain GPA and AP scores without blindly adding new challenges, focusing solely on 'stabilization + minimal reinforcement'.</li> <li>➤ Complete all standardization;</li> <li>➤ Utilize projects, competitions, and teaching stories accumulated during 11th grade and summer breaks to complete the application essays and submissions.</li> <li>➤ During the application season, continue to serve as a mentor and team member, providing real-life examples for your essays and recommendation letters.</li> </ul>	
<p><b>September–November</b></p>	<ul style="list-style-type: none"> <li>➤ Finalize the document</li> <li>➤ Submit to EA/ED</li> <li>➤ Interview Preparation</li> </ul>	<p><b>The school maintains Grade 12 curriculum at A level.</b></p>
<p><b>12–March of the following year</b></p>	<ul style="list-style-type: none"> <li>➤ Supplementary materials</li> <li>➤ Update Letter</li> <li>➤ Waitlist policy</li> </ul>	

7. | Additional File 2 – AP Course Difficulty List



8 | Additional File 2 – Activities Ranking

[HTTPS://CEP.THINKLAND.AI/ACTIVITYRANK.PDF](https://cep.thinkland.ai/activityrank.pdf)