



Tyee Modern Computing & AI Club (TMAC)

2026-2027 Parents & Students Info Night

Thursday, September 24, 2026 7-8:00 PM

Learn. Build. Explore. Together

programcomp@tyepts.org



What is this Club About?

Combining algorithmic excellence (ACSL & USACO) with modern computing (Applied AI, Quantum Computing)

TMAC is a student-centered technology club where Tyee students learn, compete, create, and collaborate.



Fundamentals

Computer science and programming fundamentals



Competitions

Competitive programming through ACSL and USACO



Projects & Games

Games and practical software projects



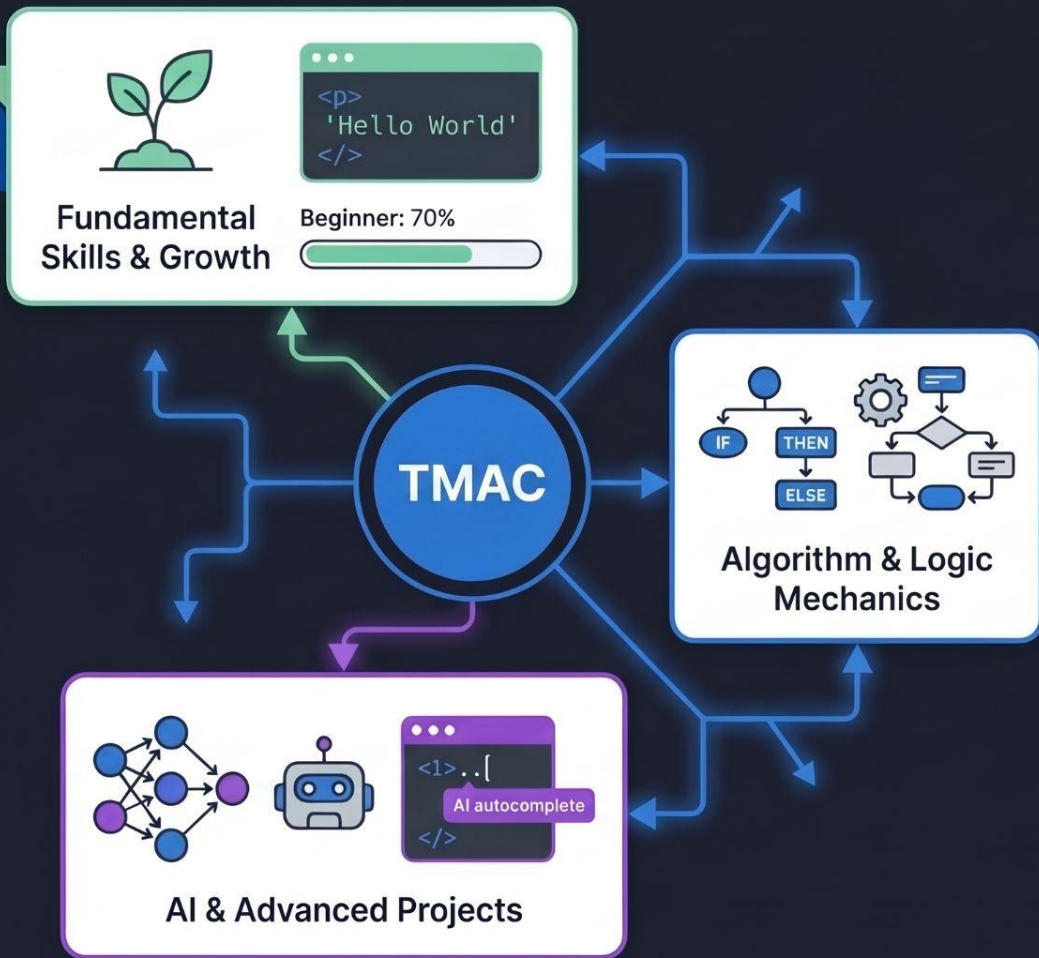
Applied AI & Modern Computing

Learn Modern Computing (Applied AI, modern coding tools, Quantum Computing)



Student Mentorship

Mentorship from high school student coaches



Evolving to meet the realities of modern software development.

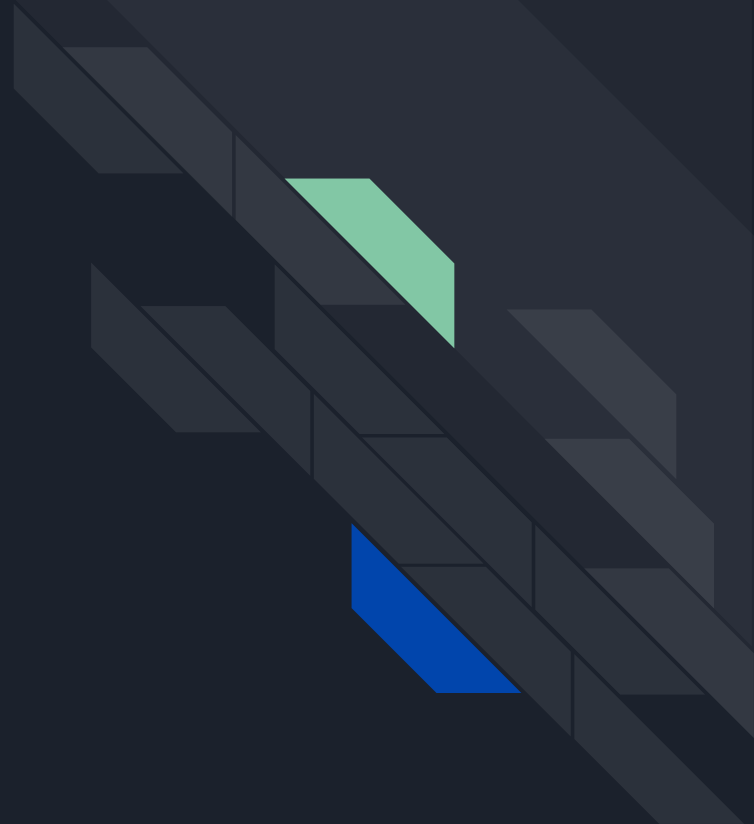
Competitive programming remains a core part of our DNA, but today's students need more to build the future.

The New Equation:
Strong Fundamentals +
Competition Skills +
Real-World Projects & AI.

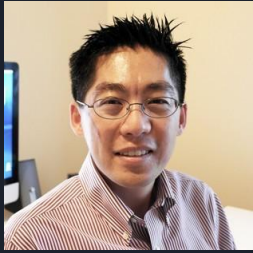
- ✓ Students would learn how modern developers responsibly use AI-assisted tools to accelerate problem-solving.

People

Chairs and Coaches



Tyee Modern Computing & AI Club Leadership



Jason Huh

Founder / Advisor



HeeSouk Park

Co-Chair



Jenny Kim

Co-Chair



MingHong Yun

Co-Chair



Xin Zhang

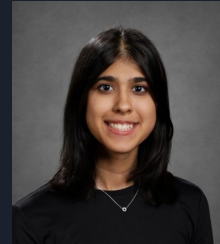
Co-Chair



Senior Coaches - 3 years Experience



Ethan Lee
Interlake



Ilina Rao
Interlake



Senior Coaches - 2 Years Experience

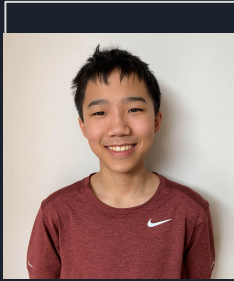


Andrew Chen
Interlake

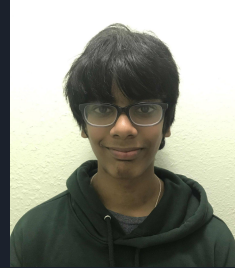


Raymond Li
Interlake

Junior Coaches - 1 Year Experience



David Zhang
Newport



Nereeksh
Kothakota
Interlake



Seohwon "Ted"
Yun
Interlake



New Coach



Kyumin
Lee
Lakeside

Alumni & Proven Track Record

University Matriculation

- UW Paul G. Allen School of CSE, MIT, Yale
- Cornell, Carnegie Mellon University (CMU)
- Top CS & STEM programs nationwide

Middle & High School Contest Placements

- Top regional & national contest awards with ACSL
- High achievements in AMC 8 & MATHCOUNTS
- Consistent USACO division advancements

Leadership & Community Impact

- Student-led peer coaching & mentorship
- Fostering collaborative problem solving
- Sustained team excellence & growth since 2022



Background

Why Programming Competitions?



Programming Competitions

Algorithmic Thinking

- Data structures & algorithms
- Language mastery (Python, C++, Java)
- Auto-graded problem solving

Mental Agility

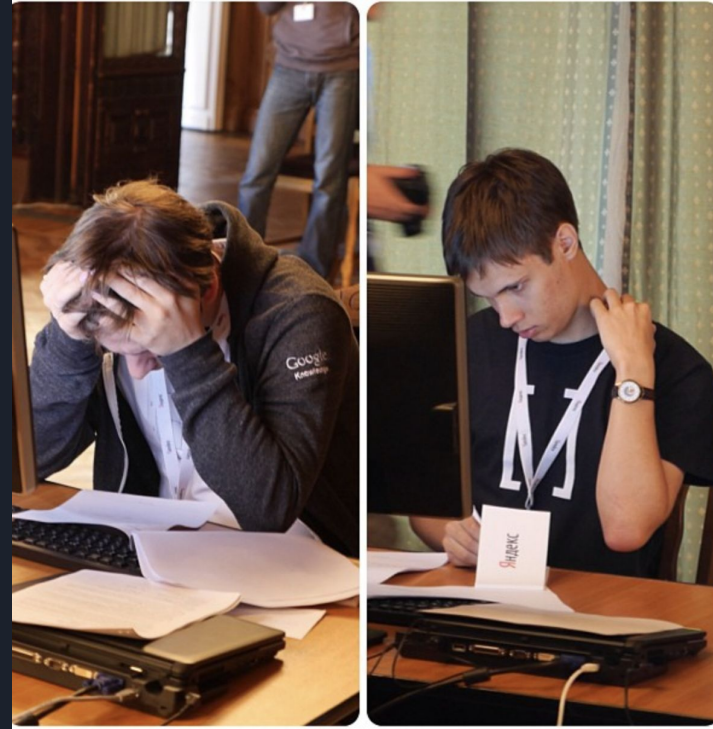
- Learn by hands-on coding
- Fast-paced logic & analysis
- Quick thinking under pressure

Resume & Portfolio Building

- Standout achievements & awards
- College & career profile proof
- Tangible project milestones

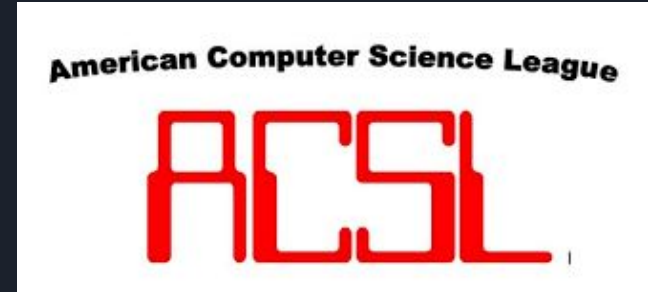
Peer Collaboration

- Build strong tech connections
- Team dynamics & mentorship
- Shared growth, recognition & fun



Competitions that you will join:

- ACSL
- USACO
- Mini contests
- Mini hackathons
- Tyee Hackathon





ACSL (American Computer Science League)

ACSL combines computer-science concepts with programming.

Students prepare together and contribute to team results, but complete official contest work independently. We help students learn the concepts, practice problem-solving, and understand contest expectations. The club sponsors and manages team registration, and an adult advisor administers the test per ACSL guidelines.



Audience

Junior Division is for Grade 9 and below.



Format Specs

4 regular-season contests. Each requires 6 short-answer questions (30 mins) + 1 programming problem. Topics include logic, number systems, reading code.



Team Dynamics

Roster options are 3-score (max 6 students) or 5-score (max 10 students).



Proposed Logistics

TMAC will host a 1-hour weekend session specific to the short-answer portion (check-in, 30-min test, resolution).

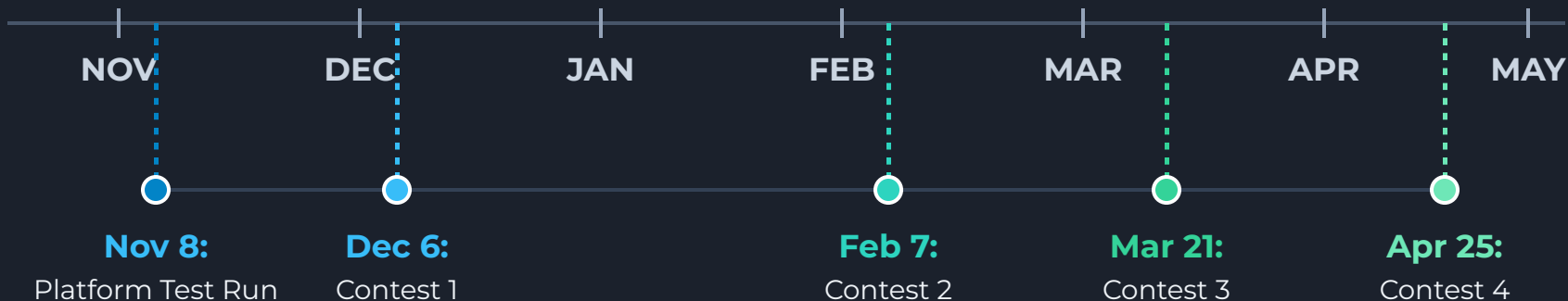
The 2026–2027 ACSL Timeline

Contest 1: Oct 19–Jan 10

Contest 2: Jan 4–Feb 28

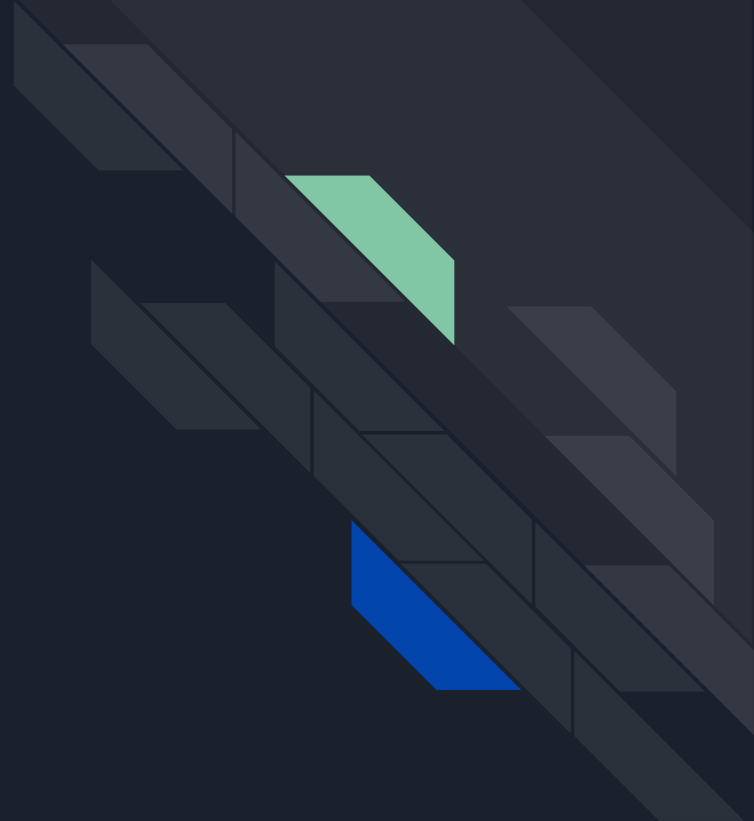
Contest 3: Feb 1–Apr 11

Contest 4: Mar 1–May 23



USACO

USA Computing Olympiad





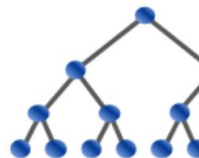
USACO (USA Computing Olympiad)

USACO is an individual algorithmic programming competition.

Students create their own free account and solve timed programming problems independently. We help students prepare, but official contest work must follow USACO rules.

Schedule: dates are usually published late November to early December when published at usaco.org.

A Computing Olympiad



VIEW DETAILS / FAQ TRAINING HISTORY RESOURCES

2025 US OPEN CONTEST, BRONZE PROBLEM 2. MORE COW PHOTOS

[Return to Problem Set](#)

Contest Home

[Log in to allow submissions in analysis mode](#)

[English](#)

The cows are in a particularly mischievous mood today! All Farmer John wants to do is take a photograph of the cows standing in a line, but they keep moving right before he has a chance to snap the picture.

Specifically, each of FJ's N cows ($1 \leq N \leq 10^5$) has an integer height from 1 to N . FJ wants to take a picture of the cows standing in line in a very specific ordering. If the cows have heights $h_1, \dots, h_K$ when lined up from left to right, he wants the heights to have the following three properties:

1. He wants the cow heights to increase and then decrease. Formally, there must exist an integer i such that

$$h_1 \leq \dots \leq h_i \geq \dots \geq h_K.$$

2. He does not want any cow standing next to another cow with exactly the same height. Formally, $h_i \neq h_{i+1}$ for all $1 \leq i < K$.

3. He wants the picture to be symmetric. Formally, if $i + j = K + 1$, then $h_i = h_j$.

Farmer John wants the picture to contain as many cows as possible. Specifically, FJ can remove some cows and rearrange the remaining cows to compute the maximum number of cows FJ can have in the picture satisfying his constraints.

USACO Divisions

PlatinumAdvanced

GoldIntermediate

SilverTMAC Supported

BronzeTMAC Supported

TMAC Support: We guide students through their algorithmic journey, specifically supporting progress through **Bronze** and **Silver** divisions.

Students advance by scoring high in official monthly online contests.

INPUT FORMAT (input arrives from the terminal / stdin):

You have to answer multiple test cases.

The first line of input contains a single integer T ($1 \leq T \leq 10^5$) denoting the number of test cases. T test cases follow.

The first line of every test case contains a single integer N . The second line of every test case contains N integers, the heights of the N cows available. The cow heights will be between 1 and N .

It is guaranteed the sum of N over all test cases will not exceed 10^6 .

OUTPUT FORMAT (print output to the terminal / stdout):

Output T lines, the i 'th line containing the answer to the i 'th test case. Each line should be an integer denoting the maximum number of cows FJ can include in the picture.

SAMPLE INPUT:

```
2
4
1 1 2 3
4
3 3 2 1
```

SAMPLE OUTPUT:

```
3
1
```

Language:

Source File:

Submit Solution

✓ C

C++11

C++17

Java

Python-2.7.17

Python-3.6.9

file selected

Note: Many issues (e.g. variables, output) may occur if you run multiple times; if you run these issues. Timing can also differ slightly from run to run just under the time limit in analysis mode, and v

USACO Logistics

CONTEST SCHEDULE

4 Contests Per Year

- Dec, Jan, Feb & March (US Open)
- Fri–Mon window (pick any 4-hour block)
- Online at usaco.org

REGISTRATION

Self-Registration

Students must register independently on the official platform prior to participating.

Accounts are free and can be created anytime on usaco.org.

SCORING MECHANICS

1000 / 3 Points per problem (~333.3 pts each)

- Points are proportional to test cases passed (excluding sample cases)
- Instant feedback: scores are calculated and visible immediately upon submission

Tyee Hackathon

An abstract graphic on the right side of the slide, featuring a series of dark gray, three-dimensional rectangular blocks arranged in a descending staircase pattern. Two blocks are highlighted: a light green one and a blue one, both positioned on the right side of the staircase.

Tyee Hackathon 2026

[Overview](#)[My projects](#)[Participants \(21\)](#)[Resources](#)[Rules](#)[Project gallery](#)[Updates](#)[Discussions](#)

Tyee Hackathon 2026

Tyee AI For Good 2026

This hackathon has ended

[Find more hackathons](#)[View the winners](#)

Who can participate

- Above legal age of majority in country of residence
- Middle school students only
- US only

[View full rules](#)[View schedule](#)

📅 Apr 23 – 26, 2026

📍 Tyee Middle School
Programming Club

🏛️ Public

6 non-cash prizes

21 participants

🚩 Tyee Middle School Programming Club

🔖 Beginner Friendly Machine Learning/AI
Social Good

<https://tyee2026.devpost.com/>

Hack for Good

[Overview](#)[My projects](#)[Participants \(24\)](#)[Rules](#)[Project gallery](#)[Updates](#)[Discussions](#)

Tyee Hackathon 2024

Tyee Hack For Good 2024

This hackathon has ended

[Find more hackathons](#)[View the winners](#)

Who can participate

- Above legal age of majority in country of residence
- Middle school students only
- US only

[View full rules](#)[View schedule](#)

📅 Apr 25 – May 1, 2024

📍 Online

🏛️ Public

[\\$250 in prizes](#)

24 participants



Tyee Middle School Programming Club



Beginner Friendly

Education

Social Good

<https://tyee2024.devpost.com/>

Hackathon Overview

Bellevue School District Event Details



Build & Learn

Students build projects around a creative theme, present their work, and celebrate everything they learn.



Who Can Join

Open to all middle school students across the Bellevue School District.



Present to Judges

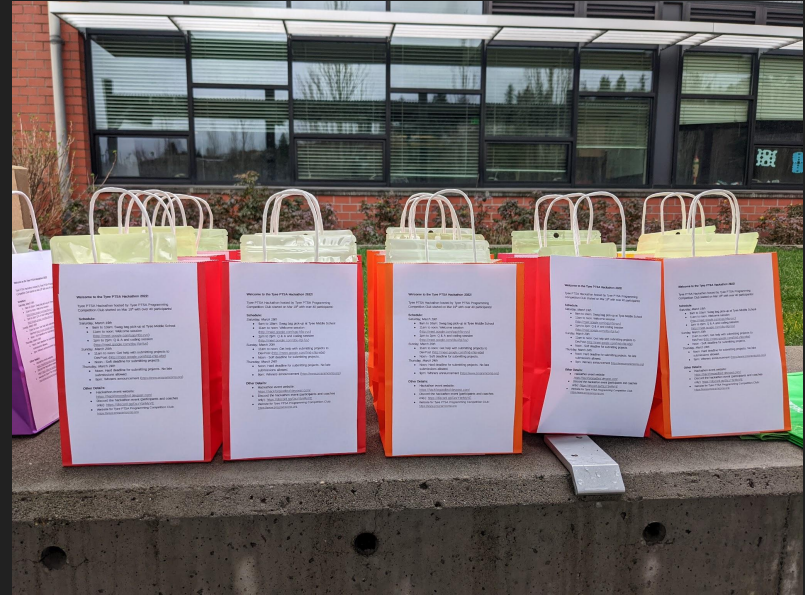
Showcase your project, explain your idea, and receive valuable feedback from judges.



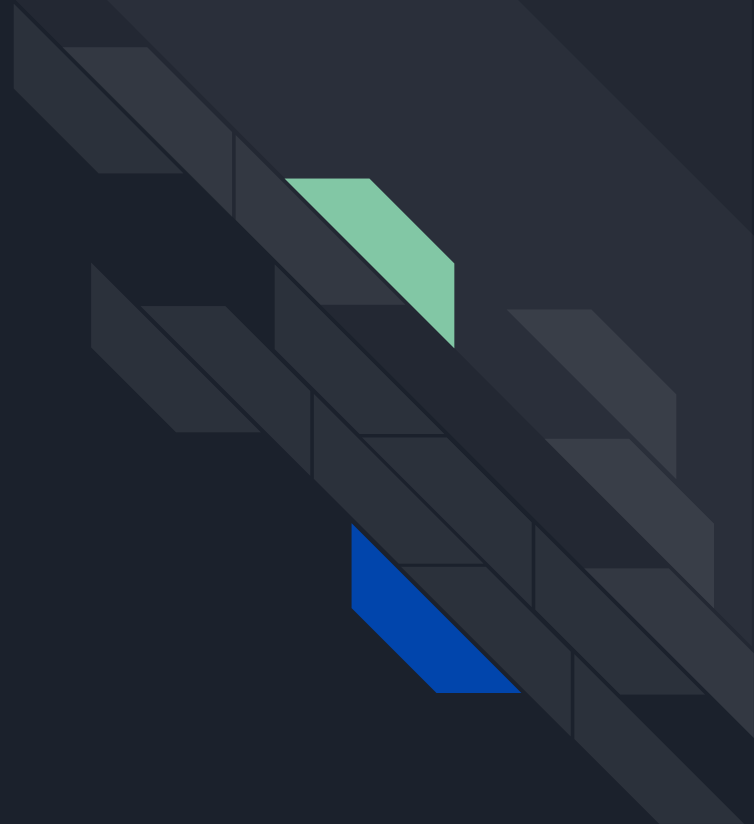
Win Prizes!

Compete for exciting awards and get recognized for your innovation and hard work.

Hackathon - Prizes



Curriculum



Curriculum 2026–2027

OCT – JAN

Fundamentals & Contests

fundamentals, algorithms, ACSL, and USACO preparation

FEBRUARY

Interactive Apps

PyGame and interactive application development

MAR – APR

Applied AI & Quantum Computing

applied AI, prompting, AI-assisted coding, quantum computing and project development

APR – MAY

Hackathon & Demos

TMAC Spring Hackathon, demos, awards, and celebration

Spring Focus: Competition preparation continues alongside projects during the spring.

Tailored Learning Pathways

3-Track Structure

BEGINNER TRACK

CS Fundamentals & Python

Variables, loops, functions, lists, intro to competitive logic, Scratch-to-Python transition, and ACSL.

INTERMEDIATE TRACK

USACO Bronze & ACSL

Data structures (sets, maps), complete search, sorting, PyGame mechanics, and introduction to AI APIs.

ELITE TRACK

USACO Silver/Gold & Advanced

Prefix sums, two pointers, graphs, flood fill, tree traversal, building custom AI agents / RAG tools, and Hackathon leadership.

Placement & Progression: Students are placed according to current skill level with clear advancement milestones throughout the year.

Industry Connections

Past Guest Speaker Events

COMPUTER RESEARCH

Ka Yee Yeung

Professor at University of Washington

ARTIFICIAL INTELLIGENCE

Allen Kim

Software Engineer at Google

GAME DEVELOPMENT

Software Engineer

Riot Games

QUANTUM COMPUTING

Software Engineer

Google

AUTONOMOUS RACING

Daniel Rhee

CS Student at UCSC

Learn with support. Compete independently.

PROJECTS

Projects

Use only approved tools, protect private information, explain your code, and test the results.

CONTESTS

Official Contests

Follow each organizer's rules and complete your own work. USACO prohibits generative AI.

ACCOUNTABILITY

Accountability

Students should be able to explain the code they submit and the choices they made.

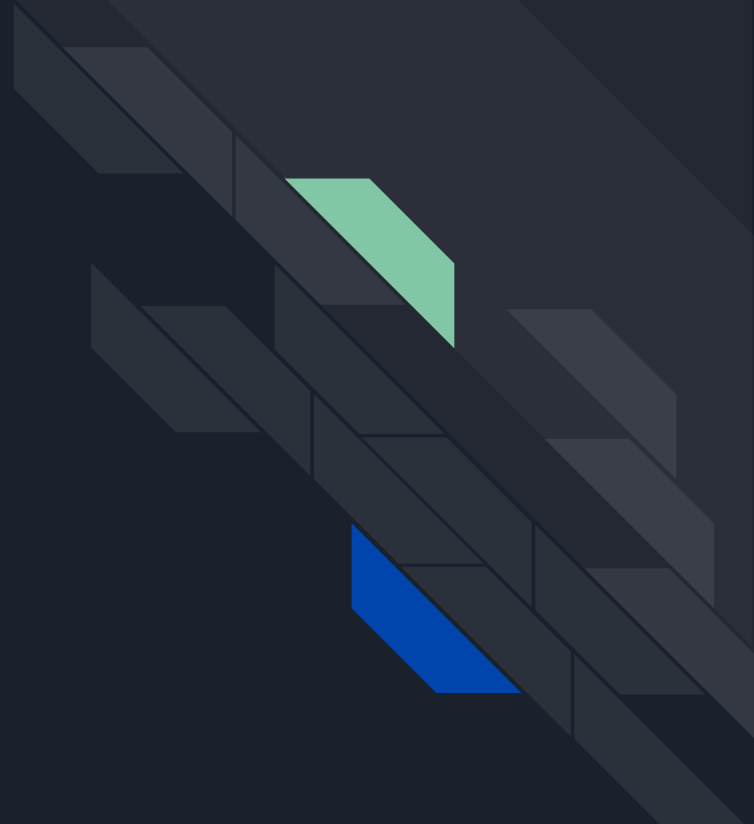
SHARING

Sharing

Do not share active contest problems or solutions before discussion is permitted.

Integrity Principle: Students are expected to understand all submitted work and adhere strictly to individual event guidelines.

Logistics





Prerequisites

- Student must have a personal laptop!
 - Because school laptop blocks most websites
- Students with **no prior coding experience are welcome** in our beginner learning
 - Placement helps us identify an appropriate starting point. Students are not expected to know every topic.
 - A personal laptop and reliable internet access are still required.



Placement Diagnostic Examples (Intermediate / Elite Tracks)

Ideally, students should be able to solve these two problems for placement evaluation:

<https://www.hackerrank.com/challenges/staircase/problem>

<https://www.hackerrank.com/challenges/diagonal-difference/problem>

Note for Beginners:

True beginners are not expected to know these problems and will start in Track 1.



Expectations

Students are expected to:

- Join the weekly club meetings without skipping
- Finish weekly homework assignments
- Respect others



Club Activities

Meeting Schedule & Hybrid Format

Thursdays 7:00 – 8:30 PM

- **In-Person:** Once per month at Tyee Commons
- **Online:** Remaining weeks via Google Meet

Communication

- **Official Updates:** Official PTSA emails are the primary communication channel
- **Discord as Online Community:** Discord is a very active community for student coach and student discussions. Parents are welcome to join.



Registration

- Registration opens *tonight!* (Membership Fee: \$80)
 - Start: 9/24/2026
 - End: 10/7/2026
 - Financial aid available
 - Seat limit to 75
- Refund Policy
 - Within two weeks from the first meeting
 - Requires Chair's approval



Placement Exam

Exam Overview & Purpose

- **Diagnostic Placement:** NOT a pass/fail elimination test — purely diagnostic to ensure students are placed in the track where they will thrive.
- **Format & Dates:** Online 60-min window administered between October 8 and October 12, 2026.
- **Access:** Invitation will be emailed after registration closes.

Preparation Materials

- **Practice Platform:** HackerRank (www.hackerrank.com)
- **Recommended Practice Domains:**
 - [Python Domain](#)
 - [Data Structures Domain](#)
 - [30 Days of Code Tutorial](#)

Home

My Account

Contact Us

Calendar

Tyee PTSA

Membership

Fundraising

Programs

Welcome Heesouk!  Select Language 

Tyee Middle School

PTSA #2.3.145

Serving Tyee Middle School in Bellevue School District

13630 SE Allen Road, Bellevue, WA 98006

TYEE PTSA

YOU BELONG • STAY CONNECTED



Our mission is to be (1) a powerful voice for all children, (2) a trusted and relevant resource for families and communities, and (3) a strong advocate for the academic, social and emotional well-being of every child.



Programming Competition Club 2025-2026



Tyee PTSA
Programming Competition Club

Club Chair: *Jason Huh, Yan Guo, Heesouk Park*

[Chair contact info](#)

Programming Competition Club aims to help students to be proficient in computer programming and computer programming for and participating in various local and online programming competitions using a variety of students' choice (Python, Java or C++).

Students will be able to participate in the [ACSL](#) and [USACO](#) competitions.

Students will be divided into 3 skill levels, and taught by High School student coaches.

Students are expected to have some programming knowledge before joining the club.

Open House Night

September 25, 2025, 7:00-8:30pm

Next Steps for Parents Tonight

1

Register Online

Visit the **Tyee PTSA** website to complete your registration.

Registration opens:
Tonight at 8:00 PM

Note: Capped at **75 spots**. Early registration recommended.

2

Key Dates

Oct 7 (11:59 PM)
Registration Closes

Oct 8-11
Online Placement Exam Window

Oct 15 (7:00 PM)
First Official Club Session!

3

Get Involved

We need parents and student coaches to support our sessions and events!

Sign up for **Chaperone roles** or co-chair positions for parents, and **Student coaches** for high school students.

Contact us to volunteer:

programcomp@tyeeptsa.org