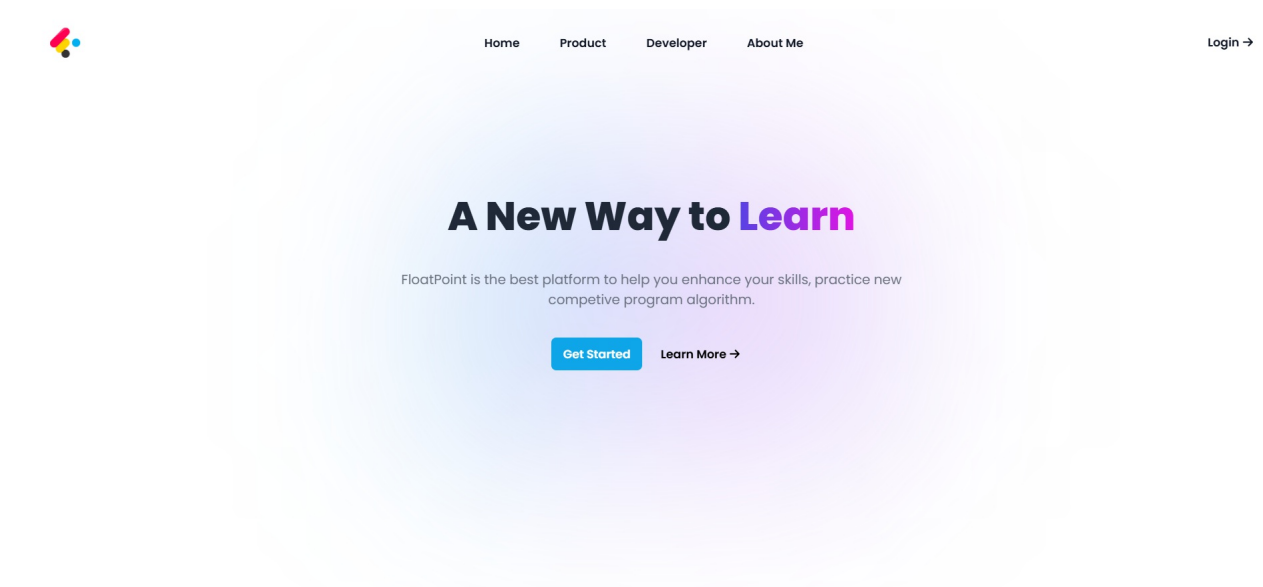


JudgeX - Online Judging System



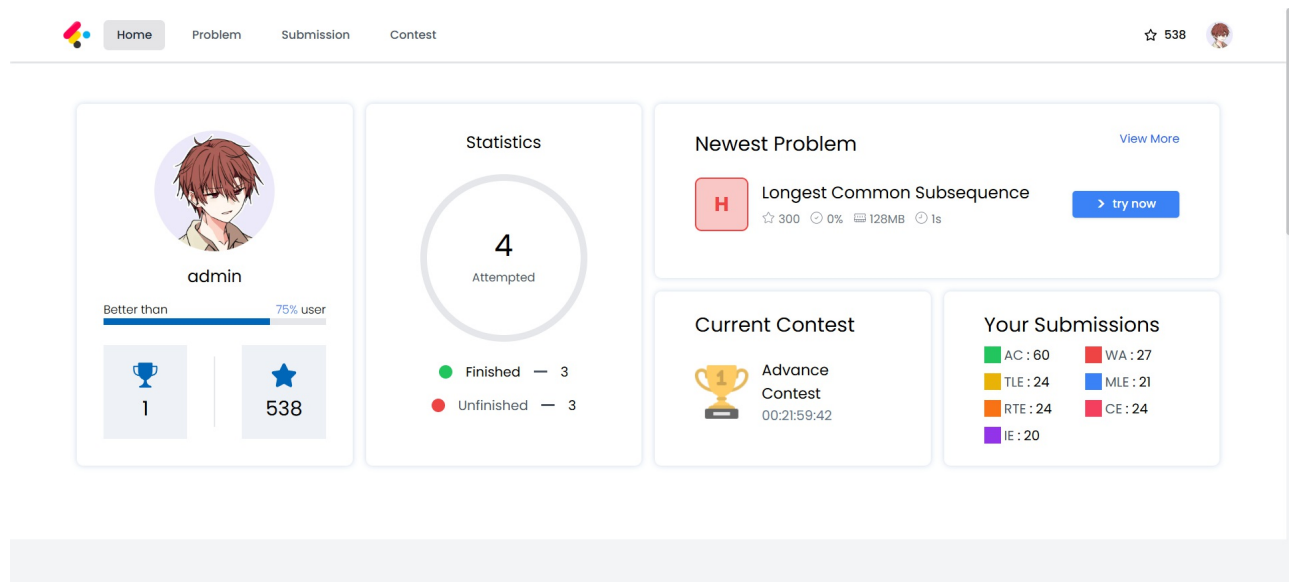
Overview

JudgeX is a comprehensive online judging system designed to facilitate programming learning and evaluation. Built with the MERN stack (MongoDB, Express, React, Node.js), it provides a complete platform for students and educators.

Key Features

1. Problem Management

- User-friendly interface for solving and submitting coding problems
- Comprehensive problem management system (create, edit, delete)
- Support for various problem types



2. Course Management System

- Educational content and video management
- Resource organization and distribution
- Student progress tracking
- Interactive learning paths
- Real-time progress monitoring
- Comprehensive course analytics

Course Features:

- Video lectures with closed captions
- Downloadable resources and materials
- Interactive coding exercises
- Progress tracking and achievements
- Discussion forums for each course

[Home](#)[Problem](#)[Submission](#)[Contest](#)

☆ 538

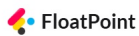
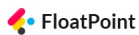
[Binary Search](#)[Graph](#)[Sort](#)[String](#)[Dp](#)[Brute Force](#)[Math](#)[Greedy](#)[Beginner](#)[Awfawf](#)[Output](#)[Io](#)[Expand](#)

Difficulty

Q Search questions



STATUS	TITLE	DIFFICULTY	TAGS	PRIVATE	POINT	%AC	#AC
	Seem senior next	Hard	Binary Search +2		100p	248%	421
	dijkstra	Medium	Graphs Dfs Bfs +1		100p	0%	0
✓	Hello World	Easy	Beginner Output		100p	21%	4
	Echo Input	Easy	Beginner Io		100p	13%	2
	New rich mission Republ...	Easy	Binary Search Dp +1	🔒	100p	7%	34
	Fill modern	Easy	String Graph +1	🔒	100p	96%	432
	Culture care task	Easy	Binary Search	🔒	100p	63%	84
	Political human	Hard	Graph Sort +1	🔒	150p	220%	402

[Dashboard](#)[Problem](#)[Submission](#)[Contest](#)[User](#)[Logout](#)[Dashboard](#)[Problem](#)[Submission](#)[Contest](#)[User](#)[Logout](#)[/ Problem](#)
ProblemHey, Admin
Admin

Difficulty

Tags

Search

[+ Create New](#)

Id	Name	Private	Tags	Difficulty	Point	#AC	%AC
#256789	Seem senior next	🔒	Binary Search Greedy Brute Force	Hard	100p	421	248%
#4	dijkstra	🔒	Graphs Dfs Bfs Findpath	Medium	100p	0	0%
#HELLO	Hello World	🔒	Beginner Output	Easy	100p	4	21%
#IO	Echo Input	🔒	Beginner Io	Easy	100p	2	13%
#PROB1001	New rich mission Republican	🔒	Binary Search Dp Graph	Easy	100p	34	7%
#PROB1002	Fill modern	🔒	String Graph Binary Search	Easy	100p	432	96%
#PROB1003	Culture care task	🔒	Binary Search	Easy	100p	84	63%
#PROB1004	Political human	🔒	Graph Sort Brute Force	Hard	150p	402	220%

[/ Submission](#)
SubmissionHey, Admin
Admin

Status

Language

Problem

Author

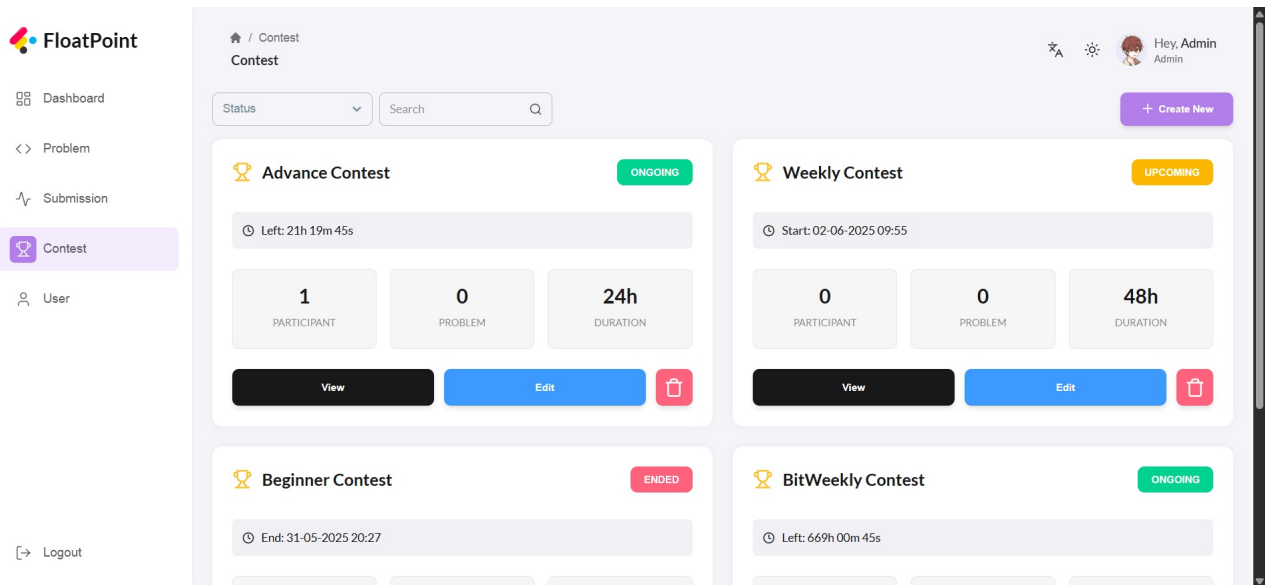
When	Id	Status	Problem	Time(S)	Memory(MB)	Language	Point	Author
01-07 03:19:44	683be5...	MLE	IO	420	122214	C++17	0	user073
30-06 00:59:35	683be5...	IE	IO	150	6541	Python2	0	user093
28-06 21:36:06	683be5...	CE	IO	99	1277	C++11	0	user066
28-06 19:57:25	683be5...	RTE	IO	41	3234	Python3	0	user049
26-06 06:04:14	683be5...	WA	IO	189	6900	C++11	11	user048
26-06 01:49:13	683be5...	AC	HELLO	9	3523	C	82	user016
25-06 03:47:02	683be5...	CE	IO	91	1619	Python3	0	user037

Status

- AC Accepted 147
- TLE Time Limit Exceeded 69
- MLE Memory Limit Exceeded 48
- RTE Runtime Error 57
- CE Compilation Error 61
- WA Wrong Answer 60
- IE Internal Error 48

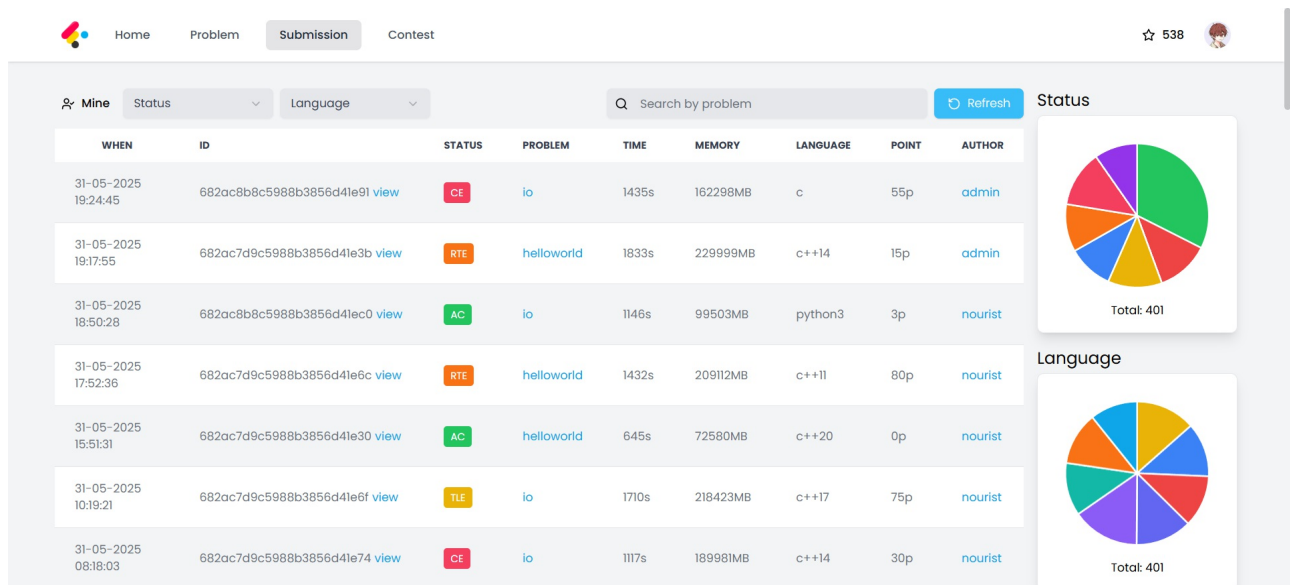
Language





3. Contest Management

- Automated programming contest organization
- Contest scheduling and time management
- Contestant ranking and results display

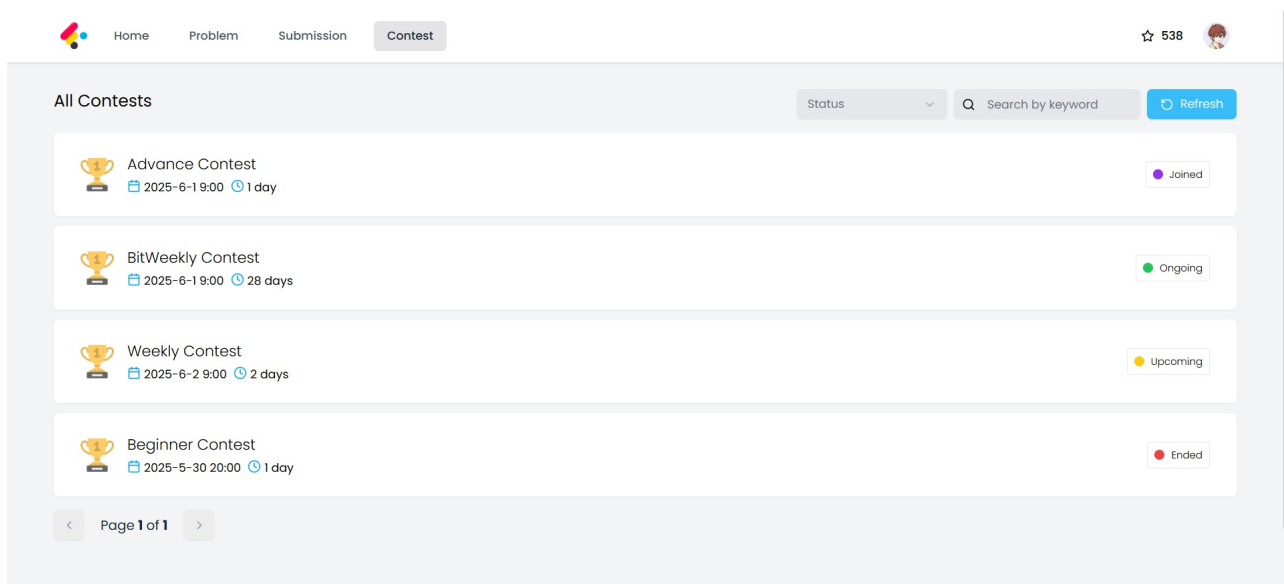


4. AI Code Evaluation Feature (New) ✨

We've integrated an intelligent system for analyzing and evaluating the quality of submitted code. This system provides:

Smart Evaluation Features:

- Code quality and structure analysis
- Performance and efficiency improvement suggestions
- Programming best practices identification
- Potential issues and security vulnerabilities detection



Guidelines and Recommendations:

Best Practices:

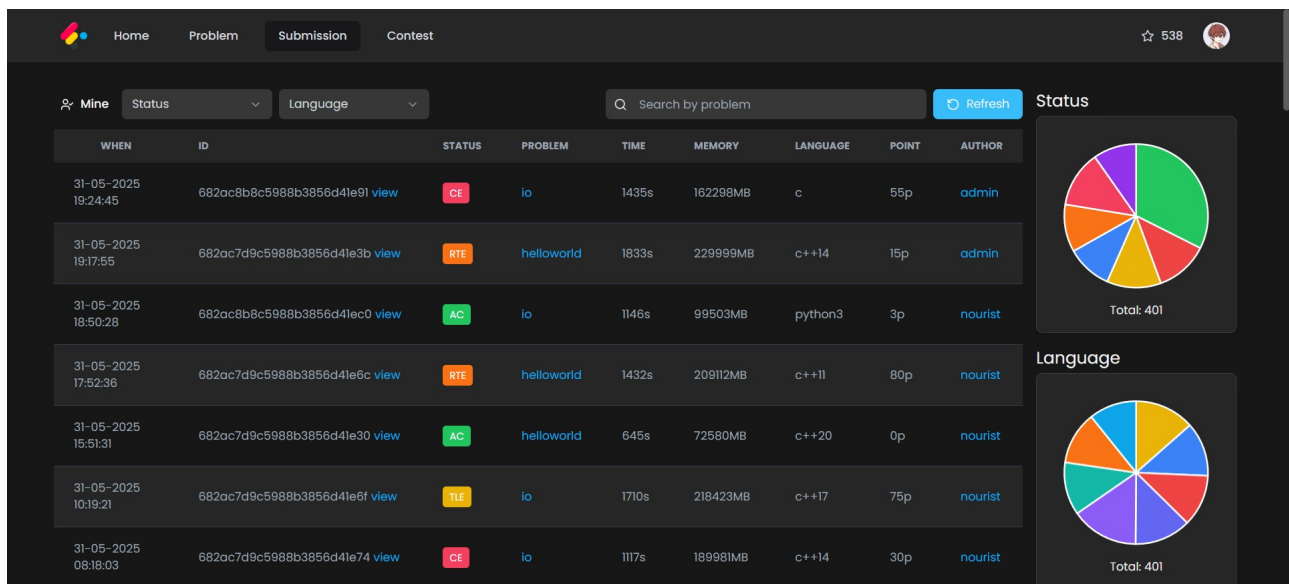
- Use clear and descriptive variable names
- Organize code into logical units
- Add appropriate documentation
- Follow clean code principles

What to Avoid:

- Unnecessary code duplication
- Excessive use of global variables
- Unhandled potential errors
- Complex and unreadable code

Technical Architecture

- **Frontend:** React with TypeScript, Tailwind CSS
- **Admin Dashboard:** React with TypeScript and TanStack Query
- **Backend:** Node.js, Express.js with TypeScript
- **Databases:**
 - MongoDB (Main Database)
 - Redis (Caching & Session Management)
- **Judging System:** Node.js with Docker



Dashboard

Problem

Submission

Contest

User

Logout

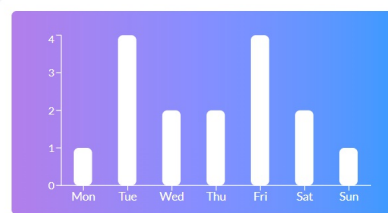
Dashboard

Today's Submissions
2 -75%

Today's Accepted
1 -50%

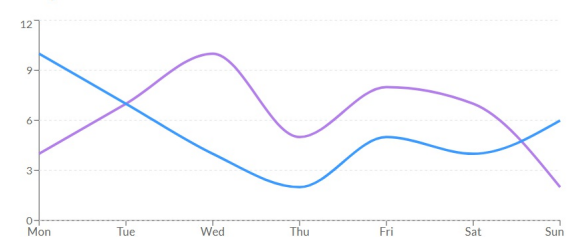
Today's Problems
2 +0%

New Users
+1 +100%



Weekly Accepted
than last week -24%

Weekly Submissions +13%



Monthly Submissions



Monthly Languages



Newest Activities +2

User user083 successfully solved problem #10

System Requirements

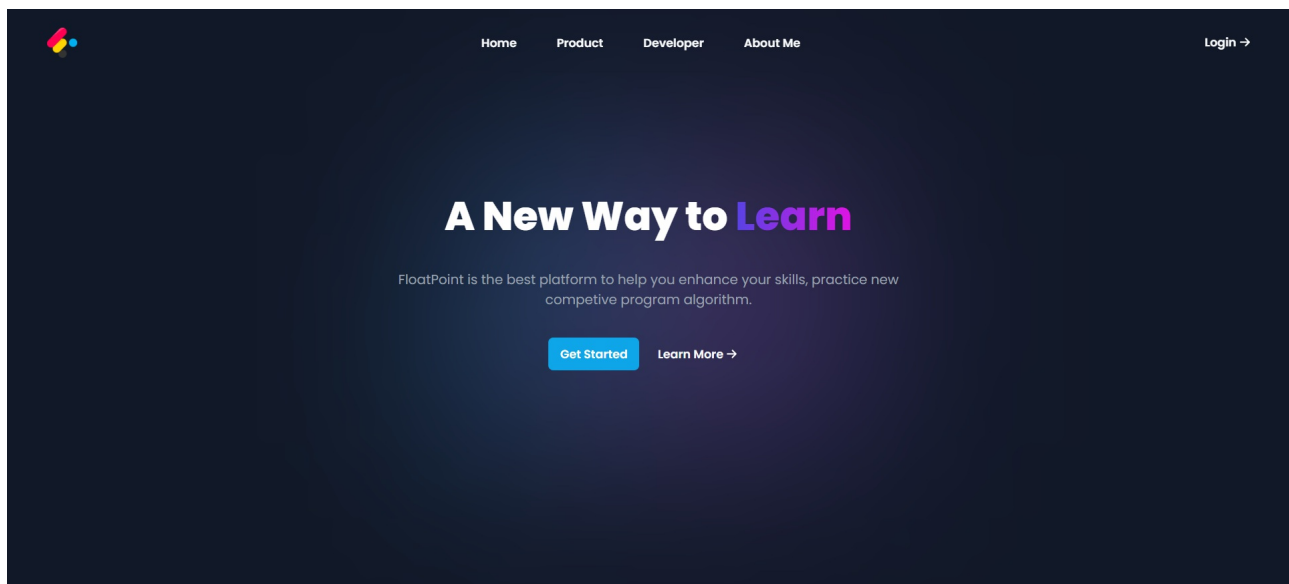
- Node.js (v18 or higher)
- npm or yarn
- Docker (optional)
- Docker Compose (optional)
- Redis Server
- TypeScript 5.0+

Development Tools

- VS Code with recommended extensions
- TypeScript and JavaScript linting tools
- Redis CLI for cache management
- MongoDB Compass for database management

Security and Privacy

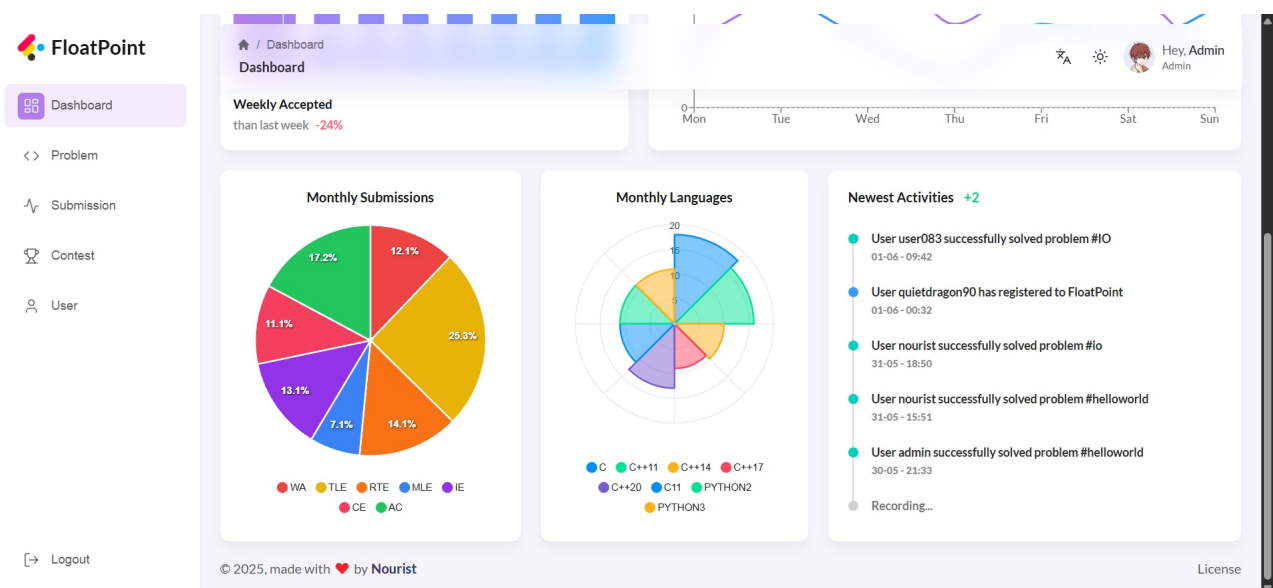
- Multi-level authentication and authorization system
- Data protection and user privacy
- Encryption of sensitive information



Admin Features

The administrative interface provides powerful tools for managing the platform:

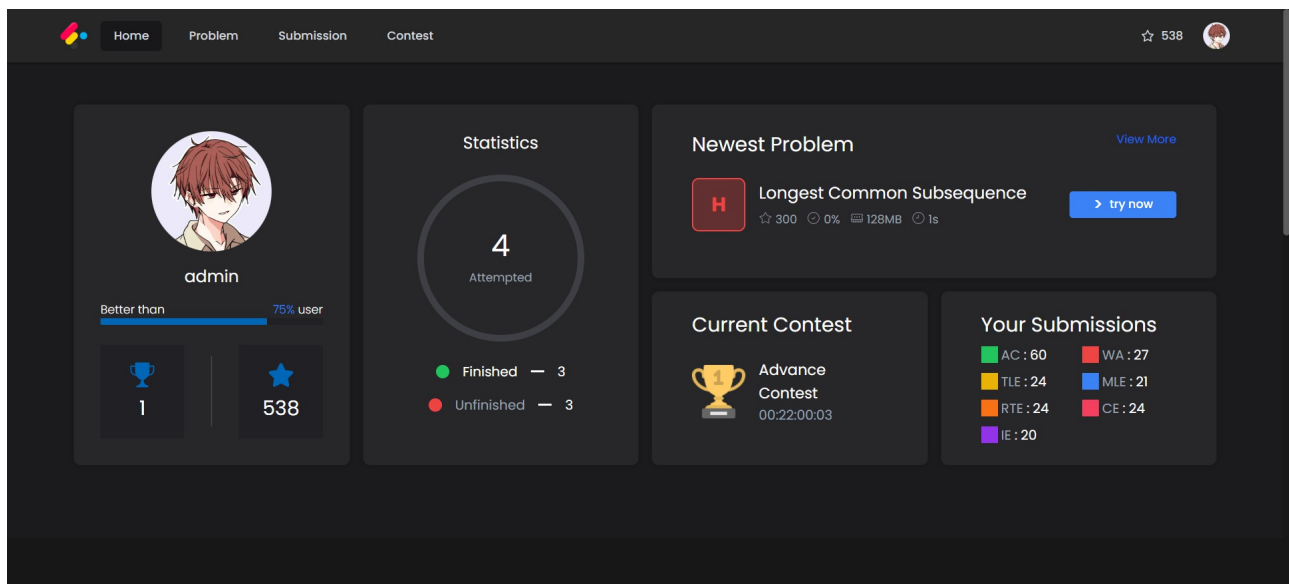
- Problem creation and management
- User administration
- Contest organization
- Course content management
- System monitoring and analytics



Student Features

Students can access a range of features:

- Solve programming problems
- Participate in contests
- Access course materials
- Track their progress
- Receive AI-powered code feedback



Future Development

We plan to add more features such as:

- Support for additional programming languages
- Enhanced AI evaluation system
- Collaborative features for users
- UI/UX improvements

Conclusion

JudgeX is an integrated platform that combines education and programming evaluation, focusing on delivering an outstanding learning experience supported by AI technologies to improve code quality and develop programming skills.

