

# Xiao Tianle

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GitHub: | [github.com/TianleXiao](https://github.com/TianleXiao) | Personal Website: [xiaotianle.top](http://xiaotianle.top)

LeetCode: Daily algorithm practice with 148+ commits

## Education

**Desheng International School (DSI)** — Shunde, Guangdong, China

International Baccalaureate Diploma Programme (IBDP), Expected Graduation: June 2027

- **Current/Predicted IB Score:** 34/45
- **Subjects & Predicted Grades:**
  - **HL:** Mathematics: Analysis and Approaches (AA), Physics, Chemistry
  - **SL:** Business Management, Chinese A: Literature, English B
  - **Predicted Group Totals:**
    - Mathematics(5)
    - Physics (7)
    - Chemistry (5)
    - Chinese A (7)
    - English B (5)
    - Business (5)
- **Relevant Subjects & Performance:** Interested in HL Mathematics AA, Physics, and Chemistry
- **Awards:** DSI Pioneer Scholarship – Recognized for academic potential and initiative
- **Standardized Tests:**
  - **IELTS:** 6.5 overall — [2026.2.15]
  - **JLPT:** N2 — [2024.7.7]

## Technical Skills

**Programming Languages:** Python (Advanced), Java & C++ (Proficient), JavaScript/HTML/CSS (Intermediate)

**Tools & Technologies:** Git & Version Control, OpenCV, MediaPipe, Three.js (3D Web), Blender/Unity (3D), YOLOv5 (Object Detection), Streamlit, PostgreSQL basics, LaTeX

**Competitive Programming & Others:** Daily algorithm practice (Daily-Algorithms repo with consistent

commits), Computer Vision & HCI projects

**Languages:** Mandarin Chinese (Native), English (Fluent – IELTS 6.5), Japanese (JLPT N2)

## Research & Projects

**GestureCtrl: Gesture-Controlled Device System** — Python, OpenCV, MediaPipe [Ongoing]

- Developed real-time hand gesture recognition system using webcam for controlling computers, lights, or robots via 21 landmark tracking
- Implemented adaptive mouse control with relative coordinates, intelligent cooldowns, and Windows API integration (PyAutoGUI + ctypes)
- Demonstrates HCI, computer vision pipelines, and low-latency interaction
- GitHub: <https://github.com/TianleXiao/GestureCtrl>

**Rugby AI: AI-Powered Touch Rugby Coaching System** — Python, OpenCV, YOLOv5, Blender/Unity, Streamlit [Ongoing]

- Built AI tool for player assessment, match analysis, and 3D tactical visualization in Touch Rugby
- Features computer vision-based tracking, performance metrics, personalized training suggestions, and interactive 3D simulations
- Applies AI/ML to sports analytics (player positioning, growth prediction)
- GitHub: <https://github.com/TianleXiao/Rugby>

**Virtual-Louvre: Immersive 3D Museum Web App** — JavaScript, Three.js (R128), GLTFLoader [2025]

- Created lightweight, high-fidelity browser-based 3D exploration of Louvre museum spaces (Grand Gallery, Sculpture Corridor)
- Implemented PointerLockControls for immersive navigation, dynamic audio (footsteps), collision detection, and responsive design
- Bridges art appreciation and modern web tech
- GitHub: <https://github.com/TianleXiao/Virtual-Louvre>

**MiniSocial: Mini Social Media Platform** — JavaScript (Full-Stack) [2026]

- Developed user authentication, posting, commenting, real-time messaging, and optional AI responses
- Focused on secure backend and interactive frontend for learning purposes
- GitHub: <https://github.com/TianleXiao/MiniSocial>

**Daily-Algorithms & VNGame (Visual Novel Game)** — Various Languages / Ren'Py or JS [Ongoing + 2025]

- Daily-Algorithms: Consistent problem-solving practice (148+ commits in Feb 2026) for data structures and algorithms mastery
- VNGame (Sakura): Interactive visual novel with branching stories, save/load, music, and character images
- GitHub: <https://github.com/TianleXiao/Daily-Algorithms>  
<https://github.com/TianleXiao/VNGame>

## Awards & Honors (STEM/CS Prioritized)

- IPC Online Silver Award (Intermediate Physics Challenge Online, affiliated with British Physics Olympiad) — [2025]
- DSI Pioneer Scholarship – Desheng International School
- Participation: UKChO (UK Chemistry Olympiad), AMC 12
- Active GitHub portfolio with multiple CS projects (e.g., GestureCtrl HCI, Rugby AI analytics, Virtual-Louvre 3D web)

## Extracurricular Activities & Leadership

**Member, School Rugby Team / Touch Rugby** — Desheng International School [2024 – Present]

- Active player in school rugby team; competed in Guangdong Province Touch Football Championship and Greater Bay Area Touchdown Rugby Tournament
- Inspired Rugby AI project through sports interest and analytics application

### IB CAS Experiences (Creativity, Activity, Service)

- G.E.T Open House: Fundraising for rural Guizhou schools (charity event with activities and volunteer teaching)
- School Sports Day: Participation and organization
- Other: Coding-related initiatives via personal projects; community-based activities (e.g., LEP Guizhou volunteering)