

Tenne Tian

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EDUCATION

Duke University, Pratt School of Engineering — B.S.E., Electrical & Computer Engineering (Class of 2030)	08/2026
● First-year; second major in Philosophy under consideration.	
Beijing No. 80 High School — Grade 10–12	09/2024 – 07/2026
● Cumulative GPA (Unweighted): 4.0/4.0, Valedictorian	
University of Pennsylvania — School of Engineering, ESAP Nanotech Program	07/2025 – 07/2025
● Completed for-credit coursework in nanotechnology (2 credits), Grade: A	
SAT: 1550 (R750/M800) Relevant APs: Calculus BC (5), Statistics (5), Physics C: E&M (5), Computer Science A (5)	
TECHNICAL SKILLS	
Programming & ML: Python, Java, MATLAB, Excel, CAD, machine learning classification pipelines (sensor-to-prediction), data collection & labeling, basic statistical analysis	
Hardware & Sensing: Graphene-based electrochemical biosensor fabrication, ESP32 + BME688 scent sensor integration, ultrasonic/IMU sensor fusion, eye-tracking technology, LLM image recognition, electrochemical workstation characterization	
Systems: End-to-end sensor → app data pipeline design and deployment (4 physical pollen stations, real-time app serving 6,000+ users)	
Languages: Native Mandarin, fluent English (TOEFL: 118 (R30/L30/S28/W30))	

RESEARCH & TECHNICAL PROJECTS

Researcher, National Science Talent Program — Chinese Academy of Sciences (UCAS)	12/2024 — 06/2026
<i>Interdisciplinary graphene biosensor research; 10–15 hrs/wk, 30 wks/yr</i>	
● Fabricated, chemically modified, and characterized graphene-based electrochemical sensors to detect pollen allergens with high sensitivity/specificity; validated results against hospital and weather-station field data.	
● Authored an 18,500-word research paper (published in Advances in Materials Physics and Chemistry) and a 40,000-word experimental log documenting methodology and iteration.	
● Deployed the sensor into a live data pipeline: 4 monitoring stations across Beijing feeding a real-time app used by 6,000+ users — the same project earned a Regeneron ISEF 2026 Grand Award. Project link: https://isef.net/project/enbm063-graphene-based-pollen-sensor	
Team Lead, Wearable Scent/Gas Sensor + ML Classifier — UPenn ESAP Nanotech Summer Program	07/2025, 35 hrs/wk, 7 wks/yr
● Led a 3-member team building a wearable graphene-based gas/scent detection sensor; trained a machine learning model to classify unlabeled food allergens (peanut, gluten) from raw scent-sensor data.	
● Studied supporting nanotechnology fundamentals — microfluidics, lithography, band-gap theory — to inform sensor design choices feeding the ML pipeline.	
Software Engineer, IRIS — LLM-Powered Eye-Tracking Wearable — ENIAC XI Hackathon	06/2026
● Built a wearable that tracks eye gaze and uses an LLM to narrate what the user is looking at in real time, aimed at assisting low-vision users; owned product scoping and feature prioritization within a 3-person team.	
● Designed the eye-tracking-to-LLM pipeline, translating raw gaze/image input into prompts and shaping model output for concise, real-time spoken narration.	
Lead Developer, AI-Assisted Blood Test Diagnostic Platform	03/2024, 30 hrs/wk, 4 wks/yr
● Led a 4-member team building a platform + AI agent that automates interpretation of blood test sheets and generates prompt prescription suggestions, addressing overcrowding at Chinese hospitals.	
● Platform is currently in trial at Beijing SJS Hospital.	

AWARDS & HONORS

● Regeneron International Science and Engineering Fair (ISEF) 2026 Grand Award , Biomedical Engineering (ENBM) — \$1,200 award
● Honor Student, 2024 National Science Talent Program; ISEF 2026 Finalist (Selection rate < 0.03%)
● Beijing 1st Prize + \$1,000 Scholarship + 3 Specialized Awards, China Adolescent Sci-Tech Contest (1 of 2/718 who earns both 1st prize & scholarship)
● Beijing 1st Prize & National 2nd Prize, Invention Convention China — for a low-cost graphene-based pollen monitoring station (top 10%)

LEADERSHIP & COMMUNITY IMPACT

Founder, China's First School-Based Pollen Detection Station	Grade 11–12
● Built and deployed 4 monitoring stations across Beijing; launched a companion app pushing real-time data to 6,000+ users; improved measurement accuracy in wind/rain conditions and added Wi-Fi for automatic updates.	
Policy Advisor, Beijing Pollen Allergy Control & Prevention	Grade 12
● Authored a 9,800-word policy proposal to the Beijing municipal government; contributed to passage of a new local policy regulating pollen-producing trees.	