# Benjamin Jiang

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## Education

**Beijing Academy**, International Division — Sept 2023 – Present

- **Grades:** GPA: 4.31, Top 3%, Student of the Year 2024, 2025
- **AP Courses:** Precalculus(5), Physics1(5), PhyscisC: Mechanics(5), Microeconomics(5), Calculus BC(C), Physics 2(5), PhyscisC: E&M(5), Macroeconomics(5), Biology (5), Statistics (5), European History (4), Japanese Language and Culture (5)
- **SAT:** 1550

## Experiences

**VEX Robotics Elective Course and Robotics Team**: Founder, Teacher, Captain — Feb 2024 - Present

- Founded the school's first VEX robotics program after seven rounds of proposals, securing ¥30,000 in funding and expanding participation to 60+ students across 6 grades
- Designed hands-on engineering lessons using sensors, circuit & mechanical design and programming; led competition teams and mentored younger students
- Rated as top three elective courses through 2024 to 2026

**Orinav** (Formerly Beacon, https://orinav.com): Co-Founder, iOS Developer & Designer — Sept 2024 - Present

- Launched an accessibility navigation app providing pedestrian navigation and real-time environmental guidance for the visually impaired. Scaled to 700+ users/5 nations.
- Designed GPS/IMU-based navigation and multimodal voice, spatial-audio, and haptic feedback; refined the system through user interviews and field testing
- Spoke at Inclusive Innovations 2025 and the 12th Beijing Academy Seminar (∼800 attendees & more online); reported by The Beijing News

**VISIO**: Electrical Engineer, Designer — Jul 2026

- Developed a wearable assistive device to improve environmental awareness for the visually impaired, started in UPenn M&TSI
- Designed and soldered power circuits integrating dual cameras, Raspberry Pi, and bone-conduction audio; analyzed power consumption and weight distribution to improve efficiency and headset stability

## Selected Honors

**Robotics**

- **Gold Award**, 2026 VEX CREATE U.S. Open Robotics Tournament - V5RC High School; **First Prize**, **Signature Event** of the 17th VEX Asia-Pacific Robotics Championship 2024

**Physics**

- **Successful Camper** (1/9), U.S. Physics Team Training & Development Camp, 2026
- **Gold Medal**, USAPhO, 2025 & 2026
- **PhysicsBowl D1 Global Top 100**, 2024

**Engineering & Programming**

- **Highly Commended**, AbilityNet Tech4Good Awards 2026; **Young Pioneer Award Finalist** (1/4); **Project:** Orinav
- **Winner**, Apple Swift Student Challenge 2024; invited to WWDC24 at Apple Park; **Project:** *Quirky Qwerty*, an AR app exploring the history of the QWERTY keyboard
- **Silver (National Second Place), Finalist**, Conrad Challenge 2025, China; **Project:** Beacon (Later Orinav), an AI-powered accessible navigation software for the visually impaired

## Publication and Research

**Orinav: A Hybrid Mobile Outdoor Navigation Application for People with Visual Impairments**: Co-First Author, SSRN Preprint — Oct 2026

- Evaluated Orinav in a within-subject study with 18 adults with visual impairments; observed 12% faster navigation, 44% fewer hesitations, and 43% fewer hazard approaches compared with Amap

**Japan's Technological Imagination: A Comparative Study of the 1970 and 2025 Osaka World Expos**: Student Researcher — Sept 2026 – Present

- Using qualitative coding of the 1970 and 2025 Osaka Expo guides to compare technological visions and assess how earlier predictions materialized

**Love unseen: A grounded theory of companion selection of working adults with visual impairments**: Co-First Author — Jun 2025

**UPenn ESAP Nanotechnology, Transistors & Lithography**: Student Researcher — Jul 2025