ADHIT RANJAN

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EDUCATION

University of Michigan, Ann-Arbor   **2025 - 2029**
Computer Science, College of Engineering
Relevant Coursework: EECS 280, MATH 215, ENGR 100, ECON 101, ENGR 110

German Swiss International School, Hong Kong   **2012 - 2025**
International Baccalaureate (IB) Diploma Program**:** 44/45,   **ACT**: 36/36
AP CS A: 5/5, **Physics C Mechanics**: 5/5, **Calculus BC:** 5/5, **Comparative Government & Politics:** 5/5

WORK EXPERIENCE

Precision Systems Design Laboratory, University of Michigan, USA — *Intern*   **Apr 2023 - Jan 2025**
- Designed a novel type of prosthetic arm powered using Continuously Variable Transmission (CVT).
- Developed an object detection algorithm using a CNN model, achieving 92% accuracy.

Indian Health Action Trust (IHAT), India — *Member, Data Science Team*   **Dec 2023 - May 2024**
- Built an automated system for tuberculosis screening from X-ray images with 97% accuracy.
- Piloted in hospitals across Uttar Pradesh, reaching 120,000 patients.

DevRev.ai, Bangalore, India — *Intern, Strategic Operations Team*   **May 2023 - Oct 2023**
- Created an app automating HR request processing, reducing response time by 30% for 350 employees.

PUBLICATIONS AND RESEARCH PROJECTS

- **Co-authored Research Paper** under review at **IEEE,** evaluating performance of a novel type of prosthetic arm powered by CVT, achieving 15% enhancement in distal grip strength.
- **Published Research Paper** in **Curieux Academic Journal** *(vol.40)* Compared the accuracy of object detection algorithms (e.g. YOLOv7, Mask R-CNN) in detecting hockey balls.
- **IB Extended Essay:** Evaluated non-neural approaches in their ability to detect household objects.

LEADERSHIP ROLES

Model United Nations — *Director / Deputy Secretary General*   **Apr 2021 - Jul 2025**
- Deputy Secretary General of HKMUN 2025, a conference with 730 participants from across Asia.
- Served as Head of Finance for the 2024 edition, generating USD 40k in revenue.

Field Hockey — *Captain, School Team / Member, Hong Kong Junior National Team*   **May 2019 - May 2025**
- Represented the Hong Kong U21 Team at international tournaments in South Korea and China.
- Mentored school team to win the HKSSF Championship in 2024 as captain, directing 30 trainings

Undersea Plastic Waste Collection — *Creator*   **May 2023 - Jul 2024**
- Designed a ROV, "WasteShark", to collect plastic waste at depths of up to 75 feet
- Conducted two cleanliness drives using the robot, collecting 50 pounds of waste.

HONORS & AWARDS

- **Hong Kong Scholarship for Excellence Scheme** recipient - awarded a USD 155k scholarship by the government of Hong Kong, among 800+ applicants.
- **South China Morning Post Student of the Year Award** (SOTY) - Second runner-up in the Grand Prize Grand Prize Category 2023-24, securing a HKD 5000 scholarship award.
- **Canadian Computing Challenge Senior Division** - Honor Roll 2024, ranking in top 1%.
- Winner of the **Hong Kong Outstanding Students Award** (**OSA**) in 2023 from over 400 applicants.
- **American Mathematics Challenge** - Scored 115.5/150 in AMC 12A 2023, securing a distinction; Qualified for and scored 12/15 in the American Invitational Mathematics Examination (AIME) 2024.
- **USA Computing Olympiad** (USACO 2023-24) - Gold Division Qualifier, ranking in the top 8%.
- Awarded **CREST Gold Award** in 2024 for developing WasteShark.
- 2023 ISSFHK *Athletics Championships* 800m: 5th Position, *Cross Country Championships*: 1st Position