

# Tianyuan(Alex) Du | Résumé

– website: [alextydu.github.io](https://alextydu.github.io) –

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## Education

### Bachelor of Science, Computer Science and Statistics (Double Majors)

University of Michigan, Ann Arbor

2022/01 – 2024/05(expected)

GPA: 3.80/4.00

Courses: Autonomous Robotics, Computer Vision, Data Mining, Human-Centric ML, Computer Organization, Data Structure, Combinatorics, Theoretical Statistics

Capstone: Predicting Song Popularity using Affective Programming. Extended version in submission to PerCom 2024.

### Computer Engineering and Business Management (Dual Degree Program)

Hong Kong University of Science and Technology (HKUST)

2020/09 – 2021/12

Courses: Random Process, Signals and Systems, Multivariable Calculus, Matrix Algebra, Case Analysis

## Experiences

### Interactive Sensing & Computing Lab, University of Michigan, Ann Arbor, US

Research Assistant

2022/05 – present

Under guidance of Professor Alanson Sample and graduate student Yang-Hsi Su, worked on a novel system for indoor sensing with Bluetooth Low Energy antenna array. Conceptualized and implemented a custom two-dimensional Angle of Arrival measurement algorithm that improved prior work. Proposed and implemented a depth estimation pipeline based on machine learning, creating a 3-dimensional localization pipeline. Designed experiments to evaluate its performances. Submitted the work to IEEE WCNC 2024 as **first author**.

### Hong Kong University of Science and Technology, Hong Kong S.A.R.

Undergraduate Research Opportunity (UROP)

2021/09 – 2022/02

Under guidance of Professor Kevin Chau from HKUST, worked on a paper for real time improvement of speech intelligibility. Constructed experiment and evaluation pipeline for the novel algorithm on a comprehensive dataset.

### Applied Sci & Tech Research Institute, Hong Kong S.A.R.

Engineer Intern

2021/06 – 2021/08

Worked in Communication Division of Network Software Group, focusing on automated-driving vehicles. Developed a system that could assist vehicles to park automatically. Developed an end-to-end automatic camera calibration pipeline with a senior engineer. Highly recognized by the group management team, and the work was presented to the Hong Kong Government.

## Awards

**2022-2023:** University Honors (two times). Awarded by University of Michigan, Ann Arbor for academic excellence.

**2021:** Dean's List. Awarded by HKUST for academic excellence.

**2021:** Scholarship Scheme for Continuing Undergraduate Student. Awarded HK 10,000\$ by HKUST for recognition and honor of outstanding academic performance (top 10% of all undergraduates).

## Skillset

**Programming Languages:** C++, C, Matlab, Python, Java, Javascript, R, SQL

**Technical Expertise:** Wireless Systems, Machine Learning, Computer Vision, Signal Processing, Robotics & Control, Database Development

**Languages:** Chinese(Native), English(Fluent)

## Extracurriculars

**Triathlon:** Member of Michigan Triathlon Club. Finisher of 2023 USAT Michigan State Championships, 2023 USA Collegiate National Championships.