

# Yidan (Adelin) Ma

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## EDUCATION

### University of Washington

Seattle, WA

Intended BS in Electrical and Computer Engineering and BS in Mathematics | GPA: 3.80 / 4.00 | Dean's List

Relevant Coursework: Accelerated Honors Calculus I to III, Honors Electromagnetism, Intermediate Data Programming.

### Hwa Chong Institution

Singapore

Singapore-Cambridge GCE A Level Certificate and Hwa Chong Diploma with Merit.

Activities and societies: Physics Olympiad, Secretary-Treasurer of Hwa Chong Astronomy Club, Hwa Chong Tennis.

## SKILLS

**Technical:** Java, Python, MATLAB, SQL, HTML, CSS, JavaScript and basic knowledge of Swift, C, C++.

**Laboratory:** Computer Aided Design (OnShape), 3-D printing, soldering, data cleaning and visualization with Python.

**Language:** Native fluency in English and Mandarin; working proficiency in Korean; elementary proficiency in French.

## EXPERIENCES

### Husky Satellite Lab

Seattle, WA

#### Attitude Determination and Control Systems Engineer - Co-Lead of Magnetorquers

Jan 2025 – Present

- Developing control systems by applying quaternion mathematics and linear algebra to fuse data from IMUs and magnetometers for precise magnetorquer coil actuation.
- Designing PCB firmware for 3U-satellite magnetorquers, including H-bridge current control and circuit design.
- Organize and lead weekly meetings with Magnetorquers Subsystem to discuss expectations and delegate work.

#### Propulsion Engineer

Oct 2024 – Jan 2025

- Created CAD designs of potentially in-house built cold gas propulsion systems for review and selection.
- Researched extensively on passive heating systems to ensure HuskySat-2 maintains optimal temperature conditions.
- Ran calculations using MATLAB to justify feasibility and effectiveness of passive heating louvers.

### Husky Union Building

Seattle, WA

#### Meeting Reservation Specialist

Sep 2024 – Present

- Draft detailed event quotes and communicate with clients about room restrictions, AV needs, and service options.
- Produce and update room layout diagrams, collaborating with event staff to assess feasibility and implement changes.
- Assists in administrative and clerical duties at the information desk, including processing signed and completed event reservation paperwork and deadlines and exemplifying excellent customer service.
- Experience in payment processing and point-of-sale cashiering for in-person transaction of over \$10,000 USD.

### Lions Befrienders Service Association

Singapore

#### TechCare Intern

Feb 2024 - Aug 2024

- Engaged and communicated with various technological companies to develop and implement projects for the elderly, including custom tablets, automated AI chatbots and non-invasive healthcare monitoring devices.
- Conducted 30+ outreach programs at public roadshows to introduce products to seniors, corporate partners, Members of Parliament and the public, speaking to large crowds reaching up to 1000 people in a day.
- Exemplified strong self-motivation and independence when conducting extensive research in quantum computing and sustainable technology to identify and evaluate potential projects.

### HCI Centre for Science Research & Talent Development

Singapore

#### Physics Researcher

Mar 2022 – Jul 2023

- Assembled a pocket-sized muon detector in-house to study the relativistic effects of cosmic particles hitting the upper atmosphere by comparing particle count rate at a known high altitude of a moving airplane and at ground level.
- Conducted data analytics on particle count readings with data visualisation and linear regression on Microsoft Excel.
- Presented the results of the project to professionals as a finalist at the Singapore Science and Engineering Fair 2023.

## PROJECTS

### Ordito AI File Organizer

#### 8VC x DubHacks Next Hack Night | Llama AI, Python, Tkinter

2025

- Developed a full-stack offline desktop app in Python that organizes files, reducing file sorting time to a few seconds.
- Integrated LLaMA AI to analyze file content locally, achieving 90%+ accuracy in folder suggestions without internet.
- Designed a intuitive Tkinter GUI enabling users to drag-and-drop files and manually select destination folder.

### Retail Data Analysis Report

#### DubsTech 2025 Datathon | Python, Pandas, Seaborn, Matplotlib, Excel

2025

- Earned special mentions for Best Data Visualization and Best Data Analysis from analyzing real-world data and produce a cohesive professional report, with judges commending the report for having 'the strongest metric'.
- Created over 100 clear, concise charts using advanced Excel formulas and Pandas data pipelines.