

# Yidan (Adelin) Ma

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## EDUCATION

**University of Washington, Paul G. Allen School of Computer Science & Engineering** Seattle, WA  
B.S. in Computer Engineering and B.S. in Mathematics | GPA: 3.80 / 4.00 | Annual Dean's List June 2027  
Relevant Coursework: Data Structures and Parallelism, Linear Optimization, Intermediate Data Programming, Advanced Accelerated Honors Calculus I to III, Foundations of Computing I and II, Honors Electromagnetism, Honors Mechanics.

## SKILLS

**Technical:** Java, Python, MATLAB, SQL, HTML, CSS, JavaScript, UI/UX, ReactJS, React Native, Git, Figma, Excel.  
**Libraries:** Pandas, Seaborn, NumPy, Matplotlib, Scikit-learn, SciPy, XGBoost, Plotly, YOLO, FastAPI.  
**Laboratory:** CAD (OnShape), 3D printing, soldering, data science, data management, data visualization, version control.  
**Language:** English and Mandarin (Native); Korean (Working); French, Japanese (Elementary).

## EXPERIENCES

**Lead of Magnetorquers in Attitude Determination and Control Systems** Seattle, WA  
**Husky Satellite Lab** Oct 2024 – 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.

**Meeting Reservation Specialist** Seattle, WA  
**Husky Union Building** Sep 2024 – Present

- Draft detailed event quotes and exemplify excellent communication skills 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.

**Lead and Web Developer** Seattle, WA  
**The Boring Club at UW** Sep 2024 – Present

- Built the Boring Club's website using HTML, resulting in a functional online presence with over 10,000 visitors.
- Secured the website and Raspberry Pi server using Cloudflare, improving the club's cybersecurity and uptime.
- Used Verilog to develop an FPGA-based Traffic Light Simulator, gaining hands-on experience with digital design.

**TechCare Intern** Singapore  
**Lions Befrienders Service Association** 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.

## PROJECTS

**Spatial and Machine Learning Analysis of Motor Vehicle Theft in King County, Washington**  
**Final Project for Intermediate Data Programming** | Python, CatBoost, Plotly 2025

- Used Pandas, GeoPandas to analyze >50,000 crime records, identifying 5 major theft hotspots and seasonal trends.
- Used SciPy for statistical hypothesis testing, revealing a statistically significant ( $p < 0.05$ ) difference in theft patterns.
- Used CatBoost in a three-stage classification model to distinguish motor vehicle theft from theft-from-vehicle incidents, achieving balanced precision and recall for robust, interpretable predictions.

**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: Accelerating the Sales of the Modecraft Ecommerce Store**  
**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.