Yidan (Adelin) Ma

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EDUCATION

University of Washington, Paul G. Allen School of Computer Science & Engineering Seattle, WA
Double Degree B.S. in **Computer Engineering** and B.A. in **Mathematics** | GPA: 3.84 / 4.00 Exp. June 2027
Relevant Coursework: Data Structures and Parallelism, Linear Optimization, Intermediate Date Programming

Massachusetts Institute of Technology, Institute for Data, Systems, and Society Synchronous Online
Certificate in Data Science and Machine Learning: Making Data-Driven Decisions Sep 2025 - Present
Leveraging Deep Learning and Generative AI to deploy solutions, driving improvements in predictive analytics for businesses.

SKILLS

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

EXPERIENCES

Analog Electronic Researcher Seattle, WA
PIONEER Experiment, Experimental Nuclear Physics and Astrophysics (CENPA) Sep 2025 – Present
- Developing an Arduino-based diagnostic tool to automatically map faulty channels in a 16-pin controller, reducing weeks of manual debugging into instant feedback and enabling faster optimization of scintillator readout hardware.

Web Developer Lead Seattle, WA
The Boring Club at UW Sep 2024 – Present
- Built the organization's website to create 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.

Magnetorquers Lead in Attitude Determination and Control Systems Seattle, WA
Husky Satellite Lab Oct 2024 – Present
- Developed control algorithms using quaternion mathematics to fuse IMU and magnetometer data, enabling precise magnetorquer coil actuation for satellite attitude control.
- Contributed to the design and integration of a flat-sat nanosatellite system under the University Nanosatellite Program in the ADCS subsystem, advancing the Husky Satellite Lab's bid for future orbital deployment.

Meeting Reservation Specialist Seattle, WA
Husky Union Building Sep 2024 – Present
- Drafted detailed quotes and managed event logistics for 200+ events in the HUB by coordinating client needs, AV requirements, and service restrictions, ensuring smooth planning and high client satisfaction.
- Provided onsite support for large-scale events (e.g., hackathons, conventions, conferences), collaborating with staff to optimize layouts and resolve issues in real time for seamless execution.

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 and the public, speaking to large crowds reaching up to 1000 people in a day.

PROJECTS

Ordito AI File Organizer
8VC x DubHacks Next Hack Night | Llama AI, Python, Tkinter 2025
- Developed a full-stack offline desktop app 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.

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 data, identifying 5 major theft hotspots and seasonal trends.
- Adopted a three-stage ML model to identify motor vehicle theft from meta data, achieving balanced f1 and recall.

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.