Yidan (Adelin) Ma

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EDUCATION

University of Washington Seattle, WA

B.S. in Computer Engineering and B.S. in Mathematics | GPA: 3.80 / 4.00 | Annual Dean's List

Relevant Coursework: Advanced Accelerated Honors Calculus I to III, Linear Optimization, Intermediate Date Programming, Foundations of Computing I and II, Honors Electromagnetism, Honors Mechanics.

SKILLS

Technical: Java, Python, MATLAB, SQL, HTML, CSS, JavaScript and basic knowledge of React Native.
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
Lead of Magnetorquers in Attitude Determination and Control Systems 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.

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.

The Boring Club at UW Seattle, WA
Lead and Web Developer 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.

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.

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 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.