

David Yang

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Informatics student with hands-on experience in AI engineering, data processing, and software testing. Skilled in C++, Python, algorithm optimization, data analysis, and human-centered problem solving

EDUCATION

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| 06/2026 | University of Washington | Seattle, WA |
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- ❖ *Bachelor of Arts* | **Major:** Informatics, relevant coursework: Database Management, Programming in Python, Data Structures & Algorithms, Human-Centered Design, Data Science Methods
 - ❖ Awards: Dean's List for Spring 2022, Winter 2022, Autumn 2022

EXPERIENCE

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| 06/2025 – 09/2025 | Aqrose Technology Co., Ltd. | Beijing, China |
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- AI Engineering Intern*
- ❖ Developed and optimized a Behavior Retrieval Plugin in C++ for an industrial AI video-analysis system.
 - ❖ Applying directed-graph learning to model worker behavior sequences and improve action-transition accuracy.
 - ❖ Integrated AiVideoCore modules to improve real-time worker tracking and SOP monitoring.
 - ❖ Built debugging tools and step-pattern validation logic to ensure consistent graph construction, node/edge integrity, and modular system reliability.
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| 06/2023 – 09/2023 | Tsinghua University — Intelligent Vision & Multimedia Lab | Beijing, China |
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- Linux Data Processing Intern*
- ❖ Managed large-scale video datasets on Linux, including dataset cleaning, structuring, uploading, and environment configuration using Conda environments
 - ❖ Optimized OCR subtitle extraction workflows by implementing frame-similarity filtering
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| 06/2022 – 09/2022 | Zhengxin Microelectronics Technology Co., Ltd. | Beijing, China |
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- Software Testing Intern*
- ❖ Designed and executed 50+ automated and manual test cases to identify UI, form-submission, and data-validation issues.
 - ❖ Collaborated with developers to fix SQL injection, XSS, and error-handling bugs in production systems.
 - ❖ Documented results using Python and Excel to support iteration and secure product release.

RESEARCH & PUBLICATIONS

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| 01/2023 – 06/2024 | Single-Line LiDAR Localization Research Project | Beijing, China |
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- Research Intern*
- ❖ Collected, cleaned, and preprocessed single-line LiDAR sensor data to support autonomous navigation localization research.
 - ❖ Contributed to the development and refinement of the Contribution Sampling and Map-Update Localization (CSMUL) framework.
 - ❖ Implemented data-filtering routines, sampling-interval adjustments, and algorithm comparison tests to evaluate localization robustness across diverse operating conditions.

Publication:

Jiang, X., Yang, D. K., Tian, Z., Liu, G., & Lu, M. (2024). *Single-Line LiDAR Localization via Contribution Sampling and Map Update Technology*. **Sensors**, 24(12), 3927. <https://doi.org/10.3390/s24123927> Affiliations: Lab for High Technology, Tsinghua University, Beijing, China; College of Arts and Sciences, University of Washington, Seattle, USA; Department of Electronic Engineering, Tsinghua University, Beijing, China. Submission received: 8 May 2024 • Revised: 12 June 2024 • Accepted: 14 June 2024 • Published: 17 June 2024**

SKILLS

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- ❖ **Skills:** C++, Python, SQL, and PyTorch, with experience in Linux, Git, debugging tools, and test automation, and strong abilities in data analysis, software testing, algorithm optimization, technical writing, and problem-solving.
 - ❖ **Languages:** English (Proficient); Chinese (Native)

Work Authorization

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- U.S. Citizen — no visa sponsorship required

