Ximu Du (Jerry)

5683 Frist Campus Center, Princeton, NJ   xd4525@princeton.edu   609-786-0883

EDUCATION

PRINCETON UNIVERSITY   **PRINCETON, NJ**
B.S.E., Electrical & Computer Engineering + Optimization & Quantitative Decision Science   *Class of 2026*
- GPA: 3.75/4.0
- Honors/Activities: Army ROTC Scholarship, Table Tennis Competitive Team & President, James Madison Program, Colonial Club, Princeton Entrepreneurship Club

PROFESSIONAL EXPERIENCE

PRINCETON UNIVERSITY   **PRINCETON, NJ**
Robotics Systems Engineer   *09/2024 - 12/2024*

- Developed an autonomous vehicle capable of maintaining constant speed, following drawn paths, and dynamically switching paths via ArUco marker detection.
- Engineered the system through circuit design, hardware integration, 3D printing.
- Programmed control logic in C (PSoC), and Python (Raspberry Pi).

PRINCETON UNIVERSITY HACKATHON   **PRINCETON, NJ**
Backend Software Engineer   *11/2024 - 12/2024*

- Collaborated on HealthCheck, an AI-driven web application that simplifies medical procedure communication for patients and families.
- Developed a core "simplification" algorithm utilizing a Large Language Model (LLM) expertly trained on a specialized medical corpus.
- Integrated multilingual support and text-to-speech (TTS) capabilities, significantly enhancing accessibility and user experience.

NANKING UNIVERSITY   **NANJING, CHINA**
Software Developer Intern   *07/2024 – 08/2024*

- Conducted real-time greenhouse gas emissions research using satellite, ground-based remote sensing, and UAVs.
- Implemented a sophisticated UAV flight path algorithm integrating the Gaussian Plume Model, Large Eddy Simulations, and machine learning models for optimized data collection.

SENSORUP   **CALGARY, AB, CANADA**
Software Developer Intern   *05/2024 — 06/2024*

- Engineered an AI chatbot specializing in complex emissions regulations, capable of processing and analyzing hundreds of thousands of pages of regulatory documents.
- Leveraged Large Language Models (LLMs) and Cosine Vector Similarity to enable sophisticated natural language understanding and information retrieval.

LEADERSHIP & ACTIVITIES

STEALTH STARTUP   **CALGARY, AB, CANADA**
Co-Founder & Chief Technology Officer   *12/2022 - PRESENT*

- Spearheaded the development and market launch of self-calibrating, low-cost, pocket-sized sensing devices for air pollutant and greenhouse gas monitoring, built with advanced hardware integration and circuit design.
- Integrated advanced machine learning models to enhance the precision and accuracy of air-quality data calibration. Conducted rigorous field testing at local landfills, achieving an accuracy of approximately 3ppm, outperforming numerous competitors.
- Secured 3rd place in the ENVISION 2024 Tech Pitch Competition. Selected for NSF's Summer 2024 Propelus I-Corps Northeast Hub.

PRINCETON UNIVERSITY TABLE TENNIS CLUB   **PRINCETON, NJ**
President & Varsity Team Captain   *09/2024 - PRESENT*

- Grew and led a 200+ member club, including 20 competitive athletes.
- Captained team to 2× NCTTA Divisional Championships and Regional Quarterfinals.
- Raised $3,000, launching weekly coach-led practices with 20–30 participants.
- Directed outreach, recruitment, budgeting, and travel, sustaining competitive success.

ADDITIONAL INFORMATION

Technical Training: Java, Python, C++, MATLAB, Stata, Arduino, Raspberry Pi, Verilog
Languages: English, Mandarin (Chinese)
Achievements: John V.D. Page Award (ROTC), Cadre Merit Award (ROTC), Fort Dix AUSA Award (ROTC)