# KEVIN SONG

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## EDUCATION

**VANDERBILT UNIVERSITY** **Nashville, TN**
***Bachelor of Science, Major in Computer Science, Minor in Business*** **Aug 2023 – May 2027**

- **Scholarship**: Full Tuition Merit-Based Ingram Scholarship (awarded to <1% of 1800 students)
- **GPA:** 3.74/4.00
- **Selected Coursework**: Foundations of Machine Learning, Artificial Intelligence, Operating Systems, Database Management Systems, Cybersecurity, Software Engineering, Data Structures, Programming Languages, Computer Architecture

## TECHNICAL SKILLS

- **Product & AI Systems:** product design, technical requirements, AI evaluation, retrieval systems, semantic search, vector embeddings, human-centered AI, user-facing workflows
- **Programming & Data:** Python, Java, JavaScript, TypeScript, C, C++, SQL, HTML, CSS; data processing, model validation, inference pipelines
- **Frameworks & Tools:** React, React Native, Node.js, Bun, Supabase, Firebase, Google Cloud Run, PyTorch, YOLO, NumPy, PySide6, Matplotlib, Git, GitHub, Raspberry Pi

## PROFESSIONAL EXPERIENCE & PERSONAL PROJECTS

**NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)** **Gaithersburg, MD**
**Software Engineering Intern - Edge AI and Smart Sensors** **May 2026 – Aug 2026**

- Developing Edge AI smart sensor testbed for ISAC, supporting sensing-assisted wireless reliability and V2X safety research
- Building Python-based AI/ML object detection tools using Raspberry Pi, Blickfeld Qb2 LiDAR, and camera inputs to fuse roadside sensor data, identify pedestrians and vehicles, and support real-time edge perception workflows
- Evaluating RSU/OBU V2X communication latency and pedestrian-safety scenarios to define when roadside perception should trigger early alerts for automated vehicles approaching occluded crossings or high-risk intersections

**ELYSIAN AI** **New York City, NY**
**Incoming Software Engineering & Product Management Intern** **Aug 2026 – Dec 2026**

- Selected for SWE/PM internship focused on ATLAS, an insurance claims-domain knowledge repository powering AI-native claims handling through full-stack development, retrieval systems, and product operations
- Will build database schemas, user-facing interfaces, and retrieval systems for accurate, source-aware AI-agent workflows
- Will bridge Product and Claims by translating claims workflows into structured schemas and AI-agent-ready product surfaces

**CANARY.AI** *(Vanderbilt Senior CS Capstone Project)* **Nashville, TN**
**Full-Stack Mobile AI Project** **Jan 2026 – May 2026**

- Led 3-member team through product design and full-stack development of React Native/Bun emergency app aggregating local news, location-relevant social posts, and National Weather Service alerts
- Integrated semantic embeddings and Supabase search to filter relevant information and deliver location-specific weather updates
- Reduced time to access critical weather information by 70%; presented at Vanderbilt's CS Senior Symposium

**SONGSEARCH** *(Independent Project)* **Clarksburg, MD**
**AI/ML Music Originality Analysis Platform** **Dec 2025 – Mar 2026**

- Built cloud-native AI/ML platform analyzing lyrical, rhythmic, motif, and melody to evaluate song originality and similarity risk
- Designed secure upload-to-inference pipeline that extracts audio features, runs originality analysis, and returns structured copyright-similarity risk results for uploaded files in under 30 seconds with minimal user input
- Deployed Firebase database, Google Cloud Run ML inference services, and React/TypeScript frontend, integrating scalable cloud backend workflows with creator-facing music analysis tools

**SIGNLECT** *(Independent Project)* **Clarksburg, MD**
**Computer Vision & Edge AI Accessibility Product** **Jul 2025 – Oct 2025**

- Built on-device Python computer vision pipeline for real-time American Sign Language translation on Raspberry Pi 5 using camera input, enabling edge AI accessibility support for classroom learning environments
- Trained custom YOLO model using PyTorch and open-source datasets on Google Colab GPUs for accessibility-focused use cases
- Deployed and optimized model on constrained hardware, improving inference speed by 100% for low-cost edge AI translation

## ADDITIONAL INFORMATION

- **Languages**: English (Native), Mandarin Chinese (Native), Spanish (Conversational)
- **Interests**: Engineering competitions, songwriting and music production, tennis, piano