HARRY JUNG

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EDUCATION

University of Michigan – Ann Arbor   September 2021 - April 2025
B.S. in Computer Science

Relevant Coursework: Data Structures and Algorithms, Mobile App Development, Web Systems, Computer Organization, Artificial Intelligence, Linear Algebra, Computer Vision, Discrete Mathematics

SKILLS

- **Programming Languages**: Python, C/C++, JavaScript, Swift, TypeScript, Java, C#, Kotlin, MATLAB
- **Frameworks & Libraries**: React, Next.js, Node.js, Express.js, Flutter, TensorFlow, scikit-learn, OpenCV, FastAPI, OpenGL, NumPy, Pandas, Beautiful Soup
- **Tools & Platforms**: AWS, Docker, Git, SQL, Linux, Android Studio, Figma, Unity3D, Firebase, Postman
- **Methodologies & Practices**: Agile, CI/CD, AI/ML Automation, Keycloak, JWT, Jira, Confluence

EXPERIENCE

Akima   Herndon, Virginia
Software Engineer   July 2025 - Present

- Launched an **AI-driven research platform** using **Next.js**, **FastAPI**, and **PostgreSQL** for the Department of Defense Information Analysis Center, reducing workflow time by **97%** (30 minutes → 1 minute).
- Integrated **AI/ML** with **AWS** (EC2, S3, RDS, OpenSearch) to accelerate document processing and search.
- Deployed **secure containers** with **Docker, Keycloak, and JWT**, improving reliability and compliance.
- Led the project in an **Agile Scrum environment**, managing sprints, backlogs, and stakeholder demos.

Software Engineering Intern   May 2024 - Aug 2024

- Built an **XR tool** with **Meta Quest 3**, **Unity3D**, and **C#** for accurate 3D construction site visualization.
- Cut design review time by **25%** and boosted collaboration efficiency by **30%** with virtual walkthroughs.
- Created a military **Emergency 911 system** using **React.js**, **Express.js**, **MySQL**, **AWS**, and **Leaflet**.
- Improved response time efficiency by **30%** with geospatial mapping and real-time data integration.

Tekkers   Ann Arbor, Michigan
Co-Founder & Full-Stack Developer   Sep 2025 – Present

- Built a real-time **iOS** app (**SwiftUI**, MapKit, Combine) with <**200ms** live updates for pickup soccer.
- Built a **Firebase** backend and **Node.js** APIs for game scheduling, notifications, profiles, and attendance.
- Implemented **AI** match suggestions (**Python + scikit-learn**) using location, skill, and attendance data.
- Automated **CI/CD** and deployed via **Vercel/AWS** Lambda; added Firebase analytics and monitoring.

Everafter   Herndon, Virginia
Founder & Full-Stack Developer   August 2025 – Present

- Deployed a scalable **React + Firebase** platform on **Vercel**, supporting real-time personalized sites.
- Built real-time interactive features with **CRUD** and automation (**Node.js + Gmail SMTP**) across galleries, timelines, maps, and movie discovery.
- Eliminated auth failures and cut DB errors **95%** with cross-device flows, error handling, and Firebase rules.
- Owned the full **SDLC** from design to deployment, ensuring scalability, reliability, and performance.

PROJECTS

WordSmith Mobile – AI-Powered Writing & Learning Platform   Jan 2025 - May 2025

- Built **modular Course & Submission JSON system** on **Supabase** for profiles, progress, and exercises.
- Implemented **AI writing validation** with **OpenAI API** and **SwiftUI** for real-time grammar feedback.
- Created **Elo-based ranking system** in **Python** to adjust difficulty, track progress, and reward players.
- Integrated **voice-to-text, OCR**, and **text-cleaning** using **SwiftUI, Speech & Vision Frameworks**.

Autonomous Robotic Vehicle Machine Learning Team   Sep 2023 – Dec 2023

- Devised **proximity** and **motor decision algorithms**, advancing toward a street-legal autonomous car.
- Refined **TensorFlow** and **OpenCV** for object detection, securing a **3rd place** finish at the IGVC.
- Designed training pipelines, processing **1000+** images with **sub-100ms** for real-time object classification.

Black and White Scene Colorization   Sep 2024 - Dec 2024

- Constructed a colorization model in **Python**/**TensorFlow** to color black-and-white landscape photos.
- Preprocessed images in **LAB** color space and built a **CNN** to predict color classes and boost vibrancy.
- Achieved a score of **4.19/5** in surveys comparing colorized to real images, limited by a 1,000-image dataset.
- Tackled overrepresentation and improved performance through **ablation** and **hyperparameter** tuning.