ESHAN IYER

Developer| Data Scientist | President's Scholarship Recipient | National Merit Finalist | Entrepreneur|
Expected to Graduate Winter '26 (Graduating Early)
eshaniyer@gmail.com | LinkedIn | Website | GitHub

Summary

- Researched and built transformer-based AI/ML models for multi-view 3D computer vision, improving object detection accuracy and enhancing perception capabilities for autonomous vehicles.
- Hands-on expertise in **Python** (NumPy, Pandas, Scikit-learn, etc.), with advanced knowledge of **Java** and **HTML**; proven ability to lead teams and deliver complex projects successfully.
- Deployed commercial **digital and mobile capabilities**, including end-to-end development of a personal website.
- Strong **entrepreneurial skills** from **multiple startup and leadership experiences**

Programming Languages

JavaScript/TypeScript| HTML, CSS| Python | JavaScript | AI Tools: GitHub Copilot, Cursor | Large Language Models: GPT-4, Claude 3, Gemini, Llama, DeepSeek

Skills

Artificial Intelligence | Computer Vision | Machine Learning | TensorFlow | Scikit-learn | Flask | Leadership | Business Development | Financial Planning | Budgeting | Business Operations

Software Engineering Projects

Cross-View CenterPoint https://bit.ly/3BIxS0g — Jun 23 – Sep 23

Implemented the **CVCP framework**, an innovative approach to 3D object detection that combines a **Cross-View Transformer (CVT)** with the **CenterPoint detection model** to leverage multi-camera systems for richer, more comprehensive visual data. By integrating diverse perspectives, CVCP significantly improves detection accuracy over traditional single-view methods, addressing key challenges in autonomous driving, robotics, and augmented reality. Led the team in developing and deploying this cutting-edge solution, demonstrating advanced expertise in **computer vision, machine learning, and multi-sensor data fusion**. This framework provides a practical path toward safer and more reliable perception systems in real-world, dynamic environments.

open360 https://bit.ly/4lxwTRg — Jun 25 - Sep 25

Developed **open360**, a privacy-focused location sharing app built with React Native, created as a lightweight, ad-free alternative to Life360. Unlike mainstream options that monetize sensitive user data, open360 was designed to give families and friends peace of mind without sacrificing digital privacy. By prioritizing **user control**, the app leverages end-to-end encryption, a minimal and intuitive UI, and open-source technologies to ensure safety and trust. Integrated Leaflet with OpenStreetMap (OSM) for **fully open-source, privacy-respecting map rendering**, eliminating reliance on closed or ad-driven map providers. Powered by Cloud Firestore for real-time location syncing and authentication, the system delivers **scalable, reliable performance** without hidden trade-offs. This project demonstrates expertise in mobile development, privacy-first architecture, and open-source geospatial tools while addressing a critical gap: providing a **safe, transparent, and ethical alternative** for location sharing in an era where data exploitation is the norm.

Universal E2EE Extension http://bit.ly/4mpjImX **Jun 25 - Oct 25**

Developed a **Universal End-to-End Encryption (E2EE) Chrome extension** that empowers users to securely encrypt and decrypt selected text locally on any website—protecting sensitive communication without relying on third-party services. Built with Chrome Extension Manifest V3, the **Web Crypto API** (AES-GCM with PBKDF2 key derivation), and Chrome Storage API, the extension delivers **serverless, client-side encryption** with domain-specific password management for convenience and security. Designed an intuitive interface with context menus, keyboard shortcuts, and in-page text replacement to provide a seamless, non-intrusive user experience. This project addresses a growing need for **accessible, user-controlled encryption** on the web, making strong cryptography practical for everyday users and demonstrating expertise in browser extension development, cryptographic APIs, and privacy-first design.

Key Accomplishments

UT Dallas 9 Week AI Bootcamp (Link) **(2022)**

Completed UT Dallas 9-Week AI Bootcamp (2022), gaining hands-on training in applied machine learning and AI development.

BPA State Competition: Qualified for the BPA State Competition in the SQL Fundamentals category **(2022)**

Collin College Hackathon (Link): Secured 3rd place in the Collin College Hackathon **(2021)**

Education

- **University of Maryland – Bachelor of Science in Computer Science** **Aug 24 – Dec 26**

  Participating in the First-Year Innovation and Research Experience (FIRE) program, a faculty-led research initiative focused on providing early exposure to real-world research and innovation. On track to graduate early in December 2024.

- **University of Maryland – Robert H. Smith School of Business, – Entrepreneurial Leadership Minor** **Jan 25 – Dec 26**

  Focused on developing an entrepreneurial mindset through coursework in innovation, business strategy, and venture creation. Gaining practical experience in identifying market opportunities, leading innovative initiatives, and applying business principles across corporate and startup environments.

- **Business Student, Young Entrepreneurs Academy, Inc** **Sep 19 – Mar 20**

  One of the top 20 students selected Young Entrepreneurs Academy to launch a company through the program with the Chamber of Commerce

Work Experience

- **Math Tutoring** **Nov 22 – Present**

  Provided one-on-one academic tutoring in math, computer science, English of all grade levels, achieving a 100% satisfaction rate from students and parents. Developed customized lesson plans to meet individual student needs and improve performance

- **North South Foundation** **Jul 24 – Aug 24 & Jun 25 – Aug 25**

  Managed and collaborated with a team of **tutors** to deliver high-quality **online instruction** in **math, science, and college readiness**. Developed and taught **interactive lessons** tailored to students' individual learning needs, while mentoring and tracking progress to ensure academic growth. Leveraged leadership and organizational skills to coordinate tutoring sessions, provide guidance to fellow tutors, and create an engaging, results-driven learning environment.

- **The University of Texas at Dallas:** Artificial Intelligence Internship **Jun 21 – Aug 21 & Jun 23 – Aug 24**

  Worked on Cross-View Transformer for Bird's Eye View Semantic Segmentation for Autonomous Driving at the University of Texas at Dallas as a summer intern

- **Teaching Assistant, Kumon North America, Inc., Frisco, TX** **Aug 21 – Aug 24**

  Assisted students in accelerating their academics. I had various roles in the organization – I started as a grader and was promoted to instructor in 6 months. Appreciated by the CEO of the business as the most reliable and trustworthy Employee. Promoted from grader to instructor within 6 months at Kumon North America, teaching mathematics and reading to students aged 6–16. Recognized by the CEO as the most reliable and trustworthy employee in the center.