ETHAN LEGUM

ethanlegum.com
ethanlegum@gmail.com
github.com/elegs99
linkedin.com/in/ethan-l/

WORK EXPERIENCE

VR Game Developer @ SLEDDVR | *C#, JavaScript, Unity, Unity Gaming Services* Jan 2023 - Jan 2025

- Solo-developed and shipped a virtual reality game, including 1 million unique maps created using procedural generation.
- Managed backend services with UGS, optimizing server calls to the cloud-based leaderboard, reducing costs by 10x.
- Created 3D models, particle effects, and marketing assets, contributing to 2,300+ downloads since launch.

Computer Vision Engineer @ PopID | *Python, Java, Kotlin, Android Studio* Jun 2023 - Aug 2024

- Deployed biometric recognition technology into Kotlin Android App to eliminate physical contact with the payment kiosk.
- Integrated backend APIs for Android POS systems, enabling roll-out of biometric payments across 250+ retail locations.
- Tested drive-thru facial recognition software resulting in 57% increase in successful matching performance.

EDUCATION

M.S. in Computer Vision @ The University of Central Florida | *GPA 3.7* Aug 2022 - May 2024

- Top Courses Medical Imaging Classification, Deep Learning & Generative AI, Robot Vision, Geometric Computer Vision
- Dean's List All Semesters

B.S. in Computer Science @ The University of Central Florida | *GPA 3.9* Aug 2017 - May 2022

- Top Courses Full-Stack Web Development, Parallel Programming, Data Management & Analysis, CS 1 & 2

PROJECTS

EffectivePose: Real-Time Pose Tracking App | *Java, Android Studio, OpenCV*

- Integrated ML Kit Pose Detection into Android app achieving local full body pose estimation at 60 fps on smartphones.
- Optimized machine learning models, increasing pose detection accuracy by 37%, ensuring accurate data collection.
- Refined overlay rendering to be asynchronous, reducing pose latency by 400%, enhancing UX and real-time processing.

LateNtMovies: Generative Image-to-Video Synthesis | *Python, Pytorch, Figma*

- Developed a novel generative video model to convert images into high-resolution coherent video clips up to 1080p.
- Enhanced motion understanding by 50% during training using temporal convolutions and latent diffusion techniques.
- Validated model effectiveness through CLIP benchmarks and human evaluations, achieving 81% realism score.

EasyMeshVR: Multiplayer VR 3D Mesh Editing | *C#, Unity, NodeJS, AWS*

- Created multiplayer VR application that allows users to collaboratively edit 3D models and upload models to a webserver.
- Managed 5-person team in building mesh-editing, multiplayer, and web architecture to launch application in 6 months.
- Implemented UI that eliminated motion sickness in users by communicating mesh state through colors.

FraudPrevent: Credit Card Fraud Detection | *Python, Keras, NumPy, Pandas*

- Architected machine learning pipeline to identify top three reasons for false fraud alerts, streamlining fraud detection.
- Stabilized model using regularization to achieve 98% separation of fraudulent and non-fraudulent data.
- Balanced dataset by artificially creating 30,000 fraudulent data points using SMOTE, improving model precision by 17%.

SKILLS

AI/ML Python, PyTorch, TensorFlow, Keras, OpenCV, NumPy, Scikit-Learn, Hugging Face, Data Modeling.

Web/Mobile Expo, React Native, TypeScript, Kotlin, React, Next.js, HTML, MySQL, MongoDB, Firebase.

VR Unity, C#, JavaScript, Game Physics, Shader Graph, Unity Gaming Services, 3D UI, OpenXR, Oculus SDK, Blender.

Soft Skills Agile, SCRUM, Technical Leadership, Public Speaking, Team Management, Cross-Functional Collaboration.