# ETHAN LEGUM

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## EXPERIENCE

**Present - Jun 2023**

**PopID**  *Computer Vision Engineer*

Built backend APIs for Android POS systems to integrate biometric payment platform into retail stores.
- Deployed new biometric recognition technology to eliminate physical contact with the payment kiosk.
- Tested drive-thru liveness software resulting in 57% increase in successful facial matching performance.
- Led team in a 4-month Steak n' Shake pilot, boosting daily transactions 10x, achieving full-scale rollout.

## EDUCATION

**May 2024 - Aug 2022**

**The University of Central Florida**  *M.S. in Computer Vision  |  GPA 3.7*
- Top Courses   Advanced Computer Vision, Medical Imaging, 3D Computer Vision, Advanced AI
- Dean's List    All Semesters

**May 2022 - Aug 2017**

**The University of Central Florida**  *B.S. in Computer Science  |  GPA 3.5  |  Core CS GPA 3.9*
- Top Courses   AI, Robot Vision, Machine Learning, Parallel Programming, CS 1 & 2

## PROJECTS

**May 2024 - Feb 2024**

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

Integrated ML Kit Pose Detection library into Android app achieving local full body pose estimation at 60 fps on modern smartphones.
- Optimized machine learning models to ensure high accuracy and real-time processing on wide range of Android devices.
- Refined overlay rendering to be asynchronous, reducing pose latency by 400%, enhancing user experience and data collection.

**Apr 2023 - Feb 2023**

**LateNtMovies: Image-to-Video Synthesis**  *Python, Pytorch*

Developed a novel generative video model using pseudo-3D latent diffusion, to convert images into high-resolution coherent video clips.
- Enhanced motion understanding in unsupervised training using latent diffusion and temporal convolutions.
- Validated model effectiveness through CLIP benchmarks and human evaluations, demonstrating superior realism and fidelity.

**Dec 2022 - Sep 2022**

**Credit Card Fraud Detection**  *Python, Keras*

Architected machine learning pipeline that efficiently detects fraud within European credit card transaction dataset.
- Stabilized model using regularization to achieve 98% separation of fraudulent and non-fraudulent data.
- Balanced dataset of 300,000 credit card transactions by artificially creating more fraudulent data using SMOTE.

**Apr 2022 - Aug 2021**

**EasyMeshVR**  *C#, Unity, NodeJS, AWS*

Created multiplayer VR application that allows users to collaboratively edit 3D models and upload their creations to a webserver.
- Managed 5-person team in building mesh-editing, multiplayer, and web architecture to launch application in 6-month period.

## LANGUAGES

### Programming

| Language | Proficiency |
|---|---|
| Python | ●●●●● |
| Java | ●●●●● |
| Html & CSS | ●●●●○ |
| C# | ●●●●○ |
| SQL | ●●●◐○ |
| JavaScript | ●●◐○○ |

### Conventional

| Language | Proficiency |
|---|---|
| English | ●●●●● |
| Hebrew | ●●◐○○ |

## SKILLS

**Development Experience**

Leading programming teams, following Agile development principles, and public speaking.

**Python**

Building predictive models and neural networks for classifying large datasets.

**Java**

Dynamic/recursive algorithms, complex data structures, and object-oriented design.

**Industry Tools**

OpenCV, PyTorch, TensorFlow, Unity, MongoDB, Android Studio Figma, NumPy, and Pandas.