

BORAN OZEL (Computer Vision Engineer | AI / Machine Learning)

Moreno Valley, CA, USA • 9513330724 • boranozel01@gmail.com • [LinkedIn/boran-ozel](https://www.linkedin.com/in/boran-ozel) • [GitHub](https://github.com)

PROFILE SUMMARY

Computer Vision Engineer and founder of Stonebridge Software LLC specializing in real-time perception systems, deep learning, and GPU-accelerated inference. Experienced in building production AI systems using Python, C++, CUDA, TensorRT, and YOLO for high-performance computer vision applications. Currently pursuing an MSCS at Georgia Tech with a focus on AI/ML and robotics.

PROFESSIONAL SKILLS

Languages:	C++ Python C# JavaScript PHP HTML/CSS
AI & Computer Vision:	YOLO OpenCV Deep Learning Neural Networks LSTM Image Processing
GPU & Inference Optimization:	CUDA TensorRT
Frameworks & Libraries:	PyTorch TensorFlow Keras NumPy Matplotlib Flask Tesseract BeautifulSoup
Systems & Tools:	SQL Linux REST APIs Arduino ESP32 PlatformIO Proteus Google Colab UI Design

WORK EXPERIENCE

Stonebridge Software LLC — Moreno Valley, California, USA

May 2019 – Present

Founder & Computer Vision Engineer

- Founded and led a software consultancy delivering 20+ production software systems for clients ranging from startups to enterprise organizations.
- Designed and deployed AI-driven computer vision solutions using **Python, C++, OpenCV, and YOLO**, achieving **95%+ object detection accuracy** in real-world environments.
- Applied computer vision and deep learning models to large-scale image and video datasets, building automated analysis pipelines for high-volume data processing and structured insight extraction.
- Built and deployed backend services on **Linux (Ubuntu)**, including **RESTful APIs**, model inference pipelines, and database-backed customer portals.
- Optimized neural network inference pipelines using **ONNX and TensorRT** to enable **GPU-accelerated real-time vision processing**.
- Developed secure, scalable backend architectures with **SQL databases** and authentication systems, supporting **2,000+ active user subscriptions** and software downloads.
- Implemented security protocols and access controls resulting in zero production security incidents.
- Optimized backend performance and delivery pipelines, reducing download latency and improving customer retention.
- Engineered RESTful APIs for order management and inventory systems, enabling real-time stock tracking, automated reorders, and cross-system data synchronization.
- Reduced operational overhead and order processing times by up to **38%** through automation and system integration.
- Designed and integrated user-facing interfaces for technical software, improving usability and reducing user error across client deployments.

California State University, San Bernardino — San Bernardino, CA, USA

Jan 2024 – May 2024

Lab Instructor — Computer Engineering

- Assisted in teaching undergraduate embedded systems labs using **MSP microcontroller boards**, guiding students through firmware development and hardware interfacing.
- Helped students debug **C/C++ code, microcontroller peripherals, and hardware integration issues** during lab sessions.
- Supported course instructors in grading assignments and managing lab exercises.

COMPUTER VISION PROJECTS

Real-Time Computer Vision Targeting System

- Developed a GPU-accelerated real-time object detection system using **YOLO, TensorRT, and CUDA**, optimizing the inference pipeline to achieve sub-10ms latency while maintaining high detection accuracy and implementing PID-based control algorithms for real-time motion tracking and prediction in interactive environments.

Automated Computer Vision Model Training Pipeline

- Designed a semi-automated ML pipeline that continuously collects labeled image data from production environments, retrains YOLO-based models, and deploys updated inference models through a CI/CD workflow. This pipeline significantly improved detection accuracy and model adaptability over time.

Hardware Input Emulation System (Arduino / ESP32)

- Developed a hardware-assisted input emulation device using Arduino and ESP32 microcontrollers to bypass OS-level input detection mechanisms. Implemented serial communication protocols and firmware-level control to synchronize with AI inference outputs.

EDUCATION

Georgia Institute of Technology (Georgia Tech) — Atlanta, USA

Jul 2025 – Present

Top 15 Global Engineering University (QS / THE Rankings)

Master of Science in Computer Science (AI/ML & Computer Vision)

California State University, San Bernardino — California, USA

Aug 2020 – Jul 2024

Bachelor of Computer Engineering

Valley View High School — Moreno Valley, California, USA

Aug 2017 – Jun 2020

High School Diploma