Channel Islands
CALIFORNIA STATE UNIVERSITY

# Computer Science Master Project Presentation

## Image Classifier with TensorFlow & CNN

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**Abstract**

This project builds a compact convolutional neural network (CNN) for image classification on CIFAR–10. The model comprises three convolutional blocks with max pooling and dropout, followed by a lightweight dense head . Training is conducted in Python with TensorFlow using standard data augmentation and early stopping with checkpointing to select the best weights. The final model is exported to TensorFlow.js and deployed in a React application for fully client-side inference. On the client, images are letterboxed to 32×32, and the UI reports Top-2 predictions with confidence scores. The resulting network is small enough for real-time inference in the browser on typical laptops and phones, and achieves **about 90% validation accuracy** on CIFAR–10. This demonstrates that accurate, responsive image classification can be delivered securely in the browser without server compute or data upload.

## 3:00–4:00 pm, Thursday, Dec 4, 2025

**Zoom:** `https://csuci.zoom.us/j/86192398264`

**All students and faculty are invited**

*An Academic Affairs Event*